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## Family-centered practices and the parental well-being of young children with disabilities and developmental delay

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## ABSTRACT

**Background:** Research evidence from studies in North America on the relationships between family-centered practices, parents' self-efficacy beliefs, parenting confidence and competence beliefs, and parents' psychological well-being was used to confirm or disconfirm the same relationships in two studies in Spain.

**Aims:** The aim of Study 1 was to determine if results from studies in North America could be replicated in Spain and the aim of Study 2 was to determine if results from Study 1 could be replicated with a second sample of families in Spain.

**Methods and procedures:** A survey including the study measures was used to obtain data needed to evaluate the relationships among the variables of interest. The participants were 105 family members in Study 1 and 310 family members in Study 2 recruited from nine early childhood intervention programs. Structural equation modeling was used to test the direct and indirect effects of the study variables on parents' well-being.

**Outcomes and results:** Results showed that family-centered practices were directly related to both self-efficacy beliefs and parenting beliefs, and indirectly related to parents' psychological well-being mediated by belief appraisals.

**Conclusion and implications:** The pattern of results was similar to those reported in other studies of family-centered practices. Results indicated that the use of family-centered practices can have positive effects on parent well-being beyond that associated with different types of belief appraisals.

### What this Paper Adds?

This paper adds to our understanding of how the effects of family-centered practices can be traced to more positive and less negative parent psychological well-being. Specifically, the results showed that how early childhood intervention practitioners interact with families and provide support is directly related to both parents' self-efficacy beliefs and parenting beliefs and indirectly

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related to parent well-being mediated by self-efficacy beliefs. In turn, positive parenting beliefs were related to parents' psychological well-being.

This research illustrates how the complex relationships among the variables in the study could be identified as evidenced by the direct, indirect, and total effects of the predictor variables on both belief appraisals and parent well-being. This complexity has implications for both developmental disabilities researchers and ECI practitioners in order to understand how professional practices have positive consequences for improving family functioning.

## 1. Introduction

The birth of a child with an identified disability or condition, and the rearing of a child with a developmental delay, is two life events that can and often do have deleterious effects on parental psychological health and well-being (Koehler, Fagnano, Montes, & Halterman, 2014; Schwarzer & Schulz, 2003; Weekes, 1999). Research indicates that parents of young children with disabilities or delays often experience increased stress (Innocenti, Huh, & Boyce, 1992; Smith, Oliver, & Innocenti, 2001) and attenuated psychological well-being (Barlow, Cullen-Powell, & Cheshire, 2006; Raina et al., 2005) in the absence of effective coping mechanisms and social support (Hassall, Rose, & McDonald, 2005; Krakovich, McGrew, Yu, & Ruble, 2016; Trute, Benzie, Worthington, Reddon, & Moore, 2010).

In addition to the adverse effects on parental psychological health and well-being, raising a child with a disability or developmental delay can also have negative effects on parents' beliefs about their child-rearing confidence and competence (Gowen, Johnson-Martin, Goldman, & Applebaum, 1989; Hassall et al., 2005). The more difficult child-rearing entails, the more parenting confidence and competence is likely to be compromised (Dempsey, Keen, Pennell, O'Reilly, & Neilands, 2009; Mas, Giné, & McWilliam, 2016).

One of the coping mechanisms that lessen stress and bolsters well-being is self-efficacy beliefs (D'Amico, Marano, Geraci, & Legge, 2013; Hall, Neely-Barnes, Graff, Kreck, & Roberts, 2012). Self-efficacy refers to "people's beliefs about their capabilities to exercise control over events that affect their lives" (Bandura, 1994, p. 71) including efficacy beliefs about rearing a child with a disability or developmental delay (Hassall & Rose, 2005; Machnes, 2009). The stronger perceived self-efficacy, the less negative are the consequences of adverse life events (Lightsey & Sweeney, 2008). The weaker perceived self-efficacy, the more negative are the consequences of adverse life events (D'Amico et al., 2013; Dunning & Giallo, 2012). In addition, the stronger perceived self-efficacy, the more positive the effects on parenting beliefs (Dunst & Dempsey, 2007) whereas the weaker perceived self-efficacy, the more negative are the effects on parenting beliefs (Dunning & Giallo, 2012; Kuhn & Carter, 2006). Two types of self-efficacy beliefs were the focus of investigation in the study described in this paper: (a) family member control over the resources and supports from ECI practitioners and (b) parenting beliefs of control over affecting changes in child behavior.

A considerable amount of research indicates that self-efficacy is related to a host of different psychological and physical health benefits (DeVellis & DeVellis, 2001; Grob, 2000; O'Leary, 1985), including parenting belief appraisals and psychological well-being (Nelson, Kushlev, & Lyubomirsky, 2014). Bandura (1997), for example, noted that "Research...shows that a strong sense of parenting efficacy yields dividends in the emotional well-being of mothers raising children *who present special difficulties*" (p. 191, emphasis added).

Parents of young children with disabilities and developmental delays often come in contact with many professionals as part of participation in early childhood intervention (ECI) (e.g., Affleck, Tennen, & Rowe, 1991; Bailey, Hebbeler, Scarborough, Spiker, & Mallik, 2004; Swick, 2004; Woods & Lindeman, 2008). The ways in which professionals interact with, treat, and provide support to parents and their children can influence self-efficacy and parenting beliefs in either positive or negative ways depending on how help is provided. Research indicates that professionals' use of family-centered practices (FCPs) is positively related to both self-efficacy beliefs and parents' sense of competence and confidence (Dunst, Trivette, & Hamby, 2007). Practitioners who employ FCPs treat families with dignity and respect; share information so parents can make informed decisions; acknowledge and build on family member strengths; actively engage family members in obtaining resources and support; and are responsive to each families' changing life circumstances (Dunst & Espe-Sherwindt, 2016; Dunst, 2002). Dunst and Espe-Sherwindt (2016), in their review of FCPs measures, found that different measures tend to include two sets of indicators: relational practice indicators and participatory practice indicators. Relational practices emphasize the use of relationship-building strategies, active and reflective listening, and practitioner beliefs about family member strengths and capabilities. Participatory practices emphasize informed family choice and decision making, active family member involvement in achieving desired goals and outcomes, and practitioner use of capacity-building helping practices.

Research reviews of FCPs studies indicate that this type of help-giving is related to a host of positive parent, family, and child outcomes, including self-efficacy beliefs, parents' sense of confidence and competence, and parent and family psychological health and well-being (Dempsey & Keen, 2008; Dunst, Trivette, Trivette et al., 2007; Rosenbaum, King, Law, King, & Evans, 1998). The relationships between FCPs and self-efficacy beliefs, however, have been found to differ as a function of the targets of belief judgments (Bugental, Johnston, New, & Silvester, 1998). Family-centered practices are more highly related to parent belief appraisals of control over practitioner and program practices and are less strongly related to belief appraisals over life events not directly influenced by early childhood practitioners (Dunst, Trivette, Trivette et al., 2007; Dunst, Trivette, & Hamby, 2008). The same is the case for the relationships between FCPs and parents' beliefs about their parenting confidence and competence (Dunst, Trivette, & Hamby, 2006, 2008). Results from these meta-analyses indicate that FCPs are indirectly related to parenting confidence and competence mediated by belief appraisals of control over program and practitioner responsiveness to family concerns and priorities.

Based on the relationships among family-centered practices, self-efficacy beliefs, parenting confidence and competence beliefs,

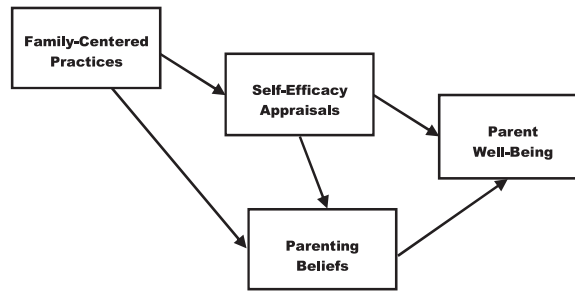


Fig. 1. Hypothesized pathways of influence for the effects of family-centered practices on parental well-being.

and parental psychological well-being described above, investigators have developed path analytic models for exploring the relationships among these variables where hypothesized relationships have been tested using structural equation modeling (Dunst & Trivette, 2009; Dunst, Hamby, & Brookfield, 2007; King, King, Rosenbaum, & Goffin, 1999; Raina et al., 2005; Trivette, Dunst, & Hamby, 2010). Close inspection of the results in these investigations indicates that FCPs have positive effects on self-efficacy beliefs where positive self-efficacy beliefs are associated with positive parenting belief appraisals (confidence and competence) and psychological well-being.

Findings from structural equation modeling (SEM) studies by Dunst et al. (e.g., Dunst, Hamby et al., 2007, 2009, Dunst, Espe-Sherwindt, & Hamby, 2019; Dunst, Hamby, & Raab, 2019; Trivette et al., 2010) were used as the foundation for the studies described in this paper. We used the relationships in those studies to (1) test the fit of the relationships among the study measures to the model in Figs. 1 and 2 evaluate the pathways of influence in two structural equation modeling studies. Both studies were conducted in Spain where we determined whether the pattern of relationship found in structural modeling studies conducted mostly in North America could be replicated with families in another country. The study was conducted as part of a line of research and practice on factors facilitating practitioner use of FCPs and the outcomes of these practices (e.g., Costa, Serrano, Dunst, Mas Mestre, & Cañadas, 2017; Mas et al., 2018; Serrano, Mas, Canadas, & Gine, 2017).

The study hypotheses, and prior research that are the basis for the pathways of influence, were:

**H1.** Family-centered practices would be directly related to both self-efficacy beliefs and parenting (confidence and competence) beliefs (Dempsey & Dunst, 2004; Dunst, Trivette, Trivette et al., 2007; Dunst, Hamby et al., 2007) and be indirectly related to parenting beliefs mediated by self-efficacy beliefs (2008, Dunst et al., 2006b).

**H2.** Self-efficacy beliefs of control over practitioner family-centered practices would be directly related to parenting beliefs (Dunst et al., 2006b) and be indirectly related to parental well-being mediated by parenting beliefs (Dunst, Hamby et al., 2007).

**H3.** Parenting confidence and competence beliefs would be directly related to parental well-being (Young, Karraker, & Lesley, 2006).

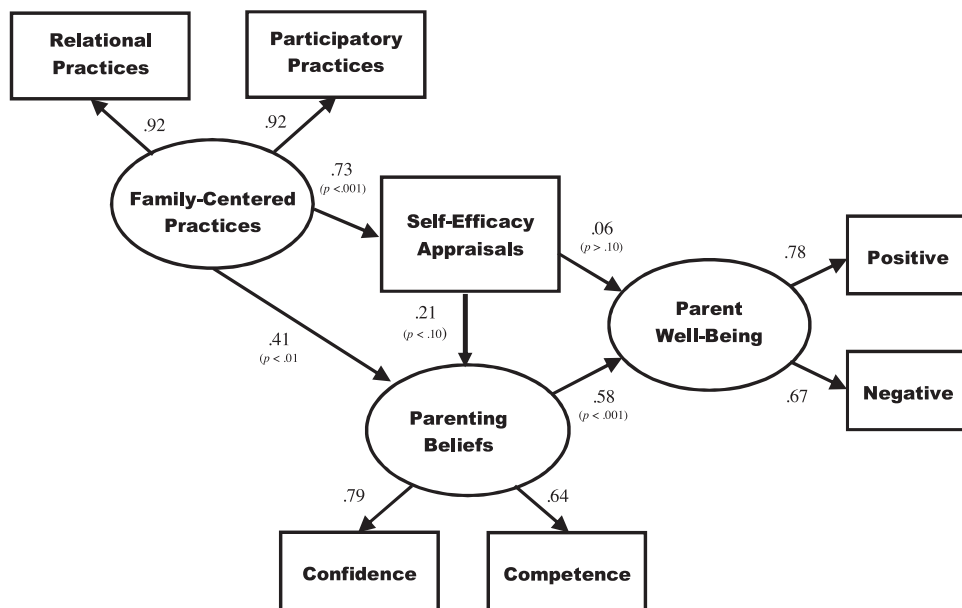


Fig. 2. Structural Coefficients for the pathways of influence among the four Study 1 variables.

**Table 1**  
Characteristics of the Study Participants.

Characteristics	Study 1		Study 2	
	N	%	N	%
<b>Respondents</b>				
Mother	74	70	247	80
Father	29	28	59	19
Other			3	1
Not Reported	2	2	1	< 1
<b>Age (Years)</b>				
20-30	3	3	22	7
31-40	68	65	180	58
41-50	23	22	65	21
50+	0	0	6	2
Not Reported	11	10	37	12
<b>Marital Status</b>				
Single	7	7	23	7
Married or Living with a Partner	92	87	267	86
Divorced or Separated	4	4	15	5
Widowed	1	1	1	< 1
Not Reported	1	1	4	1
<b>Education Level</b>				
No Formal Studies	1	1	0	0
Some Formal Studies	0	0	8	3
Primary Education	24	23	49	16
Secondary Education	39	37	166	53
University Degree	35	33	83	27
Other	4	4	0	0
Not Reported	2	2	4	1
<b>Employment Status</b>				
Full-Time	44	42	144	47
Part-Time	21	20	70	23
Unemployed (Seeking a Job)	20	19	38	12
Not Employed	17	16	54	17
Not Reported	3	3	4	1
<b>Family Income (Euro per Month)</b>				
Less than 600	3	3	18	6
600–1200	22	21	67	22
1201–1800	33	31	72	23
1801–2500	19	18	63	20
More than 2500	20	19	70	23
Not Reported	8	8	20	6

**H4.** Family-centered practices would be indirectly related to parental well-being mediated by both self-efficacy beliefs and parenting beliefs (Dunst & Trivette, 2009; Trivette et al., 2010).

Results from the different sets of analyses were expected to determine if the pattern of relationships among the study variables could be replicated between countries and within countries. Our primary interests were the indirect effect of FCPs on parent well-being mediated by the different belief appraisals and the extent to which the direct and indirect effects of FCPs and efficacy beliefs on parent well-being could be replicated as the *sine qua non* of scientific research (Francis, 2012; Simons, 2014).

## 2. Method

### 2.1. Participants

Study participants were recruited from different ECI centers in Spain: three ECI centers for Study 1 and six ECI centers for Study 2. Tables 1 and 2 show the characteristics of the study participants, their children and families, and the ECI the children and families received.

**Study 1.** A convenience sample of 105 family members of children with identified disabilities and developmental delays receiving ECI and who responded to an invitation to complete a survey were the Study 1 participants. Most participants were mothers (70%) and married or living with a partner (87%). Sixty-five (65) percent were between 31 and 40 years of age. A majority of the participants (70%) completed at least a secondary education.

The children's mean chronological age was 3.73 years (Range = 1–8) where 73% were boys. The most frequently reported child

**Table 2**  
Characteristics of the Study Participants' Children.

Characteristics	Study 1		Study 2	
	N	%	N	%
<b>Child Gender</b>				
Male	77	73	205	66
Female	26	25	104	34
Not Reported	2	2	1	< 1
<b>Child Age (Years)</b>				
0–1	5	5	18	6
1–2	19	18	32	10
2–3	17	16	46	16
3–4	19	18	118	38
4–5	18	17	71	22
5–6	4	4	16	5
6–7	4	4	0	0
7–8	2	2	0	0
Not Reported	17	16	9	3
<b>Child Diagnosis</b>				
Developmental Delay	31	30	50	16
Autism Spectrum Disorder	19	18	41	13
Intellectual Disability	14	13	20	7
Speech and Language Disorder	9	9	72	23
Attention Deficit Disorder	7	7	8	3
Physical Disability	10	10	14	4
Emotional/Behavioral Disorder	0	0	10	3
Sensory Disability	0	0	4	1
Health-Related Disability	3	3	15	5
Other	1	1	5	2
No Specific Disability	11	10	71	23
<b>Months of Early Childhood Intervention</b>				
0–12	17	16	159	51
13–24	26	25	70	23
25–36	20	19	39	12
37–48	11	10	11	4
49–60	8	8	7	2
61+	5	5	1	< 1
Not Reported	18	17	23	7
<b>Frequency of Early Childhood Intervention</b>				
Once a Week	35	33	210	68
Twice a Week	57	54	43	14
Every Other Week	0	0	47	15
Once a Month	0	0	2	< 1
Other	12	12	6	2
Not Reported	1	1	2	< 1

diagnoses were developmental delays (30%), Autism Spectrum Disorders (18%), and intellectual disabilities (13%).

**Study 2.** A convenience sample of 310 family members of children with identified disabilities and developmental delays receiving ECI and who responded to an invitation to complete a survey were the Study 2 participants. Most participants were the children's mothers (80%) who were married or living with a partner (86%). Fifty-eight (58) percent were between 31 and 40 years of age. Eighty (80) percent of the respondents completed at least a secondary education.

The children's mean chronological age was 3.42 years (Range 1–6) and 66% were boys. The most frequently reported child diagnoses were speech and language disorders (23%), developmental delays (16%), and Autism Spectrum Disorders (13%).

## 2.2. Measures

A survey was used to obtain information needed to describe the study participants and obtain measures of the variables of interest. The survey included both investigator-developed items and scales previously validated in other studies (e.g., (Trivette & Dunst, 2004) including a study investigating the psychometric properties of Spanish versions of the scales (Mas et al., 2018). The latter was modeled after instruments used by other investigators interested in both the psychometric properties of the scale items the relationships among the variables that were the focus of investigation (e.g., Dunst, Trivette, & Hamby, 2006).

### 2.2.1. Background information

Investigator-developed questions were used to obtain information about the person completing the survey, and their child and

family receiving ECI. This included child age, gender, and their primary diagnosis; the respondent's age, gender, relationship to the child, level of education, employment status, and marital status; and family monthly income and number of adults and children in the nuclear family. The survey also included questions about the frequency of intervention and the number of months of receiving ECI. Each child's primary caregiver completed the survey so that there was only one survey for each household.

### 2.2.2. Family-centered practices

We used the Spanish version (Mas et al., 2018) of the *Family-Centered Practices Scale* (Dunst & Trivette, 2003) to assess practitioners' use of FCPs. This scale is a parent-completed instrument that assesses the degree to which professionals with whom they work employ FCPs. The scale includes six relational FCPs items and six participatory FCPs items. The relational FCPs items measure the interpersonal relationships between a family member and practitioner (e.g., "The practitioner really listens to my concerns and requests"). The participatory FCPs items measure practitioner use of capacity-building practices (e.g., "The practitioner helps me be an active part of obtaining desired resources and supports"). Participants indicate for each item the extent to which ECI staff interacts with and treats them and their families on a 5-point scale ranging from 1 = never to 5 = all the time. Coefficient alpha for the total scale score was .91 in Study 1 (relational subscale alpha = .81 and participatory subscale alpha = .83) and .89 in Study 2 (relational subscale alpha = .78 and participatory subscale alpha = .83).

### 2.2.3. Self-efficacy beliefs

Self-efficacy was measured in terms of the participants' beliefs about control over the types of resources and supports provided by the ECI practitioners. Four items were used to measure the respondents' self-efficacy beliefs where the participants were asked to indicate on a 5-point Likert scale the degree to which they agreed with different belief statements (e.g., "I am able to decide with staff which aspects I want to work for my children and family"). The items were obtained from Dunst et al. (2006a). Coefficient alpha was .72 in Study 1 and .75 in Study 2.

### 2.2.4. Parenting competence and confidence beliefs

Parenting beliefs were measured in terms of participants' judgment of their ability to execute childrearing practices. Four items were used to measure the respondents' parenting competence and confidence beliefs. Participants were asked to indicate on a 5-point Likert scale the degree to which they agreed with different parenting belief statements (e.g., "I am able to provide my children activities that help them learn") (competence) (e.g., "I feel confident in my ability to help my son or daughter's development") (confidence). The items were obtained from Dunst et al. (2006a). Coefficient alpha was .64 in both Study 1 and 2.

### 2.2.5. Psychological well-being

Five items were used to measure the respondents' psychological well-being. Participants were asked to indicate, on a 5-point Likert scale, the degree to which they agreed with different well-being statements. Three items asked about positive well-being (e.g., "I think that things are going well for my family") and two items asked about negative well-being (e.g., "I feel anxious or upset"). The items were obtained from Dunst et al. (2006a). Coefficient alpha for positive well-being was .60 in Study 1 and .58 in Study 2. Coefficient alpha for negative well-being was .63 in Study 1 and .56 in Study 2.

## 2.3. Procedure

The researchers first contacted three ECI center directors in Study 1 and six ECI center directors in Study 2 to request their participation in this study and to obtain permission to contact the families of the children enrolled in these centers. ECI centers were selected via a criterion of convenience (i.e., centers that had already collaborated in previous or current projects developed by the same research group). After their approval, a meeting was held with the practitioners at the centers to explain the study, request their assistance in terms of explaining the importance of the study to the families, describe the aim and expected results, and to provide them the study measures to distribute to families receiving ECI on this services.

The information provided to the parents included the following: A letter describing the study, an informed consent letter, and the survey described above. They were also provided a telephone number and email address they could use to contact the investigators if they had any questions or concerns about the study or if they wanted to withdraw their consent and participation. It was requested that only one family member (father, mother or other primary caregivers) complete the FCPs scale and other survey measures within 15 days and return completed survey and informed consent letter to the center in a sealed envelope to ensure confidentiality. Once the center had collected the sealed envelopes, the directors sent the completed scales and surveys to the researchers who prepared the responses for subsequent analysis.

## 2.4. Method of analysis

Structural equation modeling (SEM) was used to evaluate the effects of family-centered practices on parental well-being mediated by self-efficacy and parenting belief appraisals (Jöreskog & Sörbom, 2014). SEMs were used in both Study 1 and Study 2 with both measured and latent variables to identify the best fitting model. The measured variables were the sums of the scores for the (a) two family-centered practices measures (relational and participatory), (b) two parenting belief measures (confidence and competence), and (c) the two well-being measures (positive and negative). The latent variables included the two subscale measures for family-centered practices, parenting beliefs, and parental well-being. SEMs for all combinations of measured and latent variables were run.

**Table 3**  
Correlations Among the Study Measures.

Study Variables	FRP	FPP	SEA	CON	COM	PWB	NWB
FCP Relational Practices (FRP)	—	.84**	.69**	.41**	.38**	.28*	-.25*
FPC Participatory Practices (FPP)	.84**	—	.66**	.34*	.38**	.35**	-.28*
Self-Efficacy Appraisals (SEA)	.60**	.67**	—	.42**	.30**	.27**	-.25*
Parenting Confidence (CON)	.38**	.32**	.51**	—	.51**	.40**	-.32**
Parenting Competence (COM)	.37**	.36**	.42**	.46**	—	.24*	-.25*
Positive Parental Well-Being (PWB)	.46**	.35**	.37**	.44**	.34**	—	-.53**
Negative Parental Well-Being (NB)	.32**	-.23**	-.22**	-.27**	-.17*	-.50**	—

NOTES. FCP = Family-Centered Practices. Study 1 correlations above the diagonal and Study 2 correlations below the diagonal.

\* p < .01.

\*\* p < .001.

The fit of the models to the pattern of relationships among the variables in the models was evaluated using the root mean square error of approximation (RMSEA), standardized root mean residual (SRMR), comparative index (CFI), incremental fit index (IFI), and normed fit index (NFI). The closer RMSEA and SRMR are to zero, and the closer CFI, IFI, and NFI are to one, the better the fit of the model to the data (Hu & Bentler, 1995). A preponderance of indices reaching recommended levels was used as the criterion for establishing an acceptable model fit (Hooper, Coughlan, & Mullen, 2008).

Both SEMs included tests for the direct, indirect, and total effects of the study variables on parental well-being. Effects decomposition (Kline, 2005) was used to identify the pathways of influence in the models. Standardized coefficients between contiguous variables were used to test for direct effects and the products of these coefficients were used to test for indirect effects (Bollen, 1987; Sobel, 1988). Total effects were determined by the sums of direct and indirect effects.

### 3. Results

Table 3 shows the correlations among both the Study 1 and Study 2 measures. All of the correlation coefficients in both sets of data are statistically significant. The directions of the effects are also all as expected. Both family-centered practices measures were positively correlated with the three belief measures (self-efficacy beliefs, parenting competence beliefs, and parenting confidence beliefs) and positive parental well-being and negatively correlated with negative parental well-being. The pattern of relationships between the three belief measures and parental well-being was much the same. The correlation matrices in both studies were imputed in LISREL for the SEMs.

#### 3.1. Study 1 analyses

The best fitting SEM is shown in Fig. 2. RMSEA was .00 (90% CI = .00–.10), SRMR was .03, CFI was .99, IFI was .99, and NFI was .95. All five indices met generally agreed upon thresholds and indicate a good fit of the model to the relationships among the variables in the model. Three of the five structural coefficients for the direct effects were statistically significant. The patterns of relationships among the variables in the model are generally consistent with the study hypotheses as evidenced by effects decomposition.

Table 4 shows the effects decomposition results for the direct, indirect, and total effects of family-centered practices, self-efficacy beliefs, and parenting beliefs on parental well-being. As expected, FCPs were directly related to both self-efficacy beliefs and parenting beliefs. Family-centered practices were also indirectly related to parental well-being mediated by both self-efficacy beliefs and parenting beliefs.

Self-efficacy beliefs were directly related to parenting beliefs, and indirectly related to parental well-being mediated by parenting beliefs. Parenting beliefs were directly related to parental well-being.

**Table 4**  
Standardized Direct, Indirect, and Total Effects of the Predictor Variables on Parent Self-Efficacy Beliefs Appraisals, Parenting Beliefs, and Parent Well-Being for Study 1.

Predictor Variables	Criterion Measures	Effects Decomposition					
		Direct	p-value	Indirect	p-value	Total	p-value
Family-Centered Practices	Self-Efficacy Appraisals	.73	< .001	—	—	.73	< .001
	Parenting Beliefs	.41	< .01	.15	< .10	.56	< .001
	Parent Well-Being	—	—	.37	< .001	.37	< .001
Self-Efficacy Appraisals	Parenting Beliefs	.21	< .10	—	—	.21	< .10
	Parent Well-Being	.06	> .10	.12	< .10	.18	< .10
Parenting Beliefs	Parent Well-Being	.58	< .001	—	—	.58	< .001



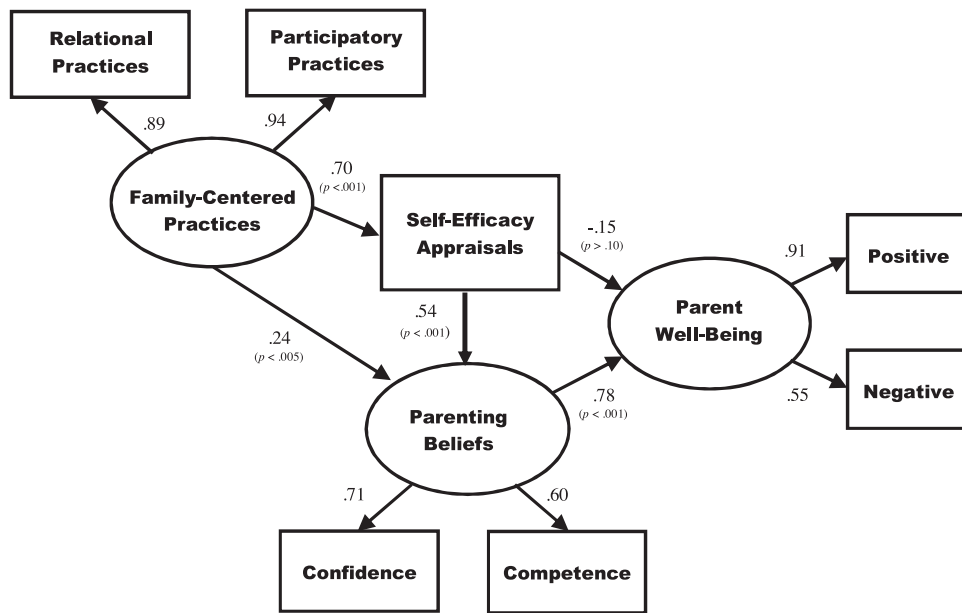


Fig. 3. Structural coefficients for the pathways of influence among the Study 2 variables.

### 3.2. Study 2 analyses

Fig. 3 shows the SEM for the fit of the Study 1 model to the data. RMSEA was .11 (90% CI = .08–.14), SRMR was .05, CFI was .97, IFI was .97, and NFI was .96. The indices indicate a reasonably good fit of the model to the data. All of the path coefficients in the model were statistically significant except for the direct effect between self-efficacy beliefs and parental well-being. The patterns of relationships were consistent with expectations.

The complete set of direct, indirect, and total effects are shown in Table 4. Family-centered practices were directly related to both self-efficacy beliefs and parenting beliefs, and indirectly related to parental well-being mediated by both the self-efficacy and parenting belief measures. Self-efficacy beliefs were directly related to parenting beliefs, and indirectly related to parental well-being mediated by parenting beliefs. Parenting beliefs were directly related to parental well-being.

### 3.3. Model comparisons

A comparison of the results from the two sets of analyses found that the indices for the fit of the models to the data were more similar than different, and that the indirect effects of FCPs on parental well-being mediated by both kinds of belief measures (self-efficacy beliefs and parenting beliefs) were almost identical ( $\beta = .37, p < .001$ , and  $\beta = .38, p < .001$ , respectively in Studies 1 and 2).

Closer inspection of the pathways of influence, however, indicates a few differences in the two sets of analyses. In Study 1, the influence of FCPs on parenting beliefs was direct ( $\beta = .41, p < .01$ ) but only marginally indirectly related to parenting beliefs mediated by self-efficacy beliefs ( $\beta = .73 \times .21 = .15, p < .10$ ). In contrast, the relationship between FCPs and parenting beliefs in Study 2 was both direct ( $\beta = .24, p < .005$ ) and indirect mediated by self-efficacy beliefs ( $\beta = .70 \times .54 = .38, p < .001$ ).

There were also differences in the pathway of influence of family-centered practices on parental well-being. Whereas the indirect effect of family-centered practices on parental well-being mediated by parenting beliefs was similar in both Study 1 ( $\beta = .41 \times .58 = .24, p < .02$ ), and Study 2 ( $\beta = .24 \times .78 = .19, p < .005$ ), the indirect effect of family-centered practices on parental well-being mediated by self-efficacy beliefs through parenting beliefs was significant in Study 2 ( $\beta = .70 \times .54 \times .78 = .29, p < .001$ ) but not in Study 1 ( $\beta = .73 \times .21 \times .58 = .09, p > .10$ ).

The patterns of relationships among the variables in Study 1 indicate that the influence of FCPs on parental well-being is primarily through parenting beliefs. In Study 2, the patterns of relationships among the variables indicate two pathways of influence between FCPs and parental well-being; one through parenting beliefs, and one through self-efficacy beliefs and parenting beliefs. Despite the few differences in the sizes of effect for the relationships among the variables in the two SEMs, the results were more similar than different as evidenced by the fit indices and effects decomposition results.

## 4. Discussion

The studies described in this paper examined the manner in which practitioners' use of FCPs was related to parent psychological well-being. More specifically, we evaluated the relationships between family-centered relational and participatory practices, self-



**Table 5**

Standardized Direct, Indirect, and Total Effects of the Predictor Variables on Parent Self-Efficacy Beliefs Appraisals, Parenting Beliefs, and Parent Well-Being for Study 2.

Predictor Variables	Criterion Measures	Effects Decomposition					
		Direct	p-value	Indirect	p-value	Total	p-value
<b>Family-Centered Practices</b>	Self-Efficacy Appraisals	.70	< .001	—	—	.70	< .001
	Parenting Beliefs	.24	< .005	.38	< .001	.62	< .001
	Parent Well-Being	—	—	.38	< .001	.38	< .001
<b>Self-Efficacy Appraisals</b>	Parenting Beliefs	.54	< .001	—	—	.54	< .001
	Parent Well-Being	-.15	> .10	.42	< .001	.27	< .10
<b>Parenting Beliefs</b>	Parent Well-Being	.78	< .001	—	—	.78	< .001

efficacy beliefs, parenting confidence and competence beliefs, and families' positive and negative psychological well-being. Structural equation modeling was used in both studies to test the fit of a model based on results from previous research on the relationships among the variables in the model (e.g., King et al., 1999; Thompson et al., 1997; Trivette et al., 2010). The findings for families in Spain were the same or very similar to those reported in other studies mostly in North America (e.g., Dunst, Hamby et al., 2007; King et al., 1999; Thompson et al., 1997).

The Study 1 model was used to evaluate the fit of the data to the SEM in Study 2 for replication purposes. The results provided support for both the hypothesized direct and indirect effects shown in both Fig. 3 and Table 5. The findings showed that how practitioners interact with families is directly related to parents' self-efficacy beliefs and parenting beliefs and indirectly related to parenting beliefs mediated by self-efficacy beliefs (Bailey, Nelson, Hebbler, & Spiker, 2007; King et al., 1999; Trivette et al., 2010). More specifically, our results showed that the more parents judged the practices of the ECI practitioners as family-centered, the more control they reported over the supports and assistance received from the practitioners with whom they worked in a manner identical to that found in other studies (e.g., Dunst, Trivette, Trivette et al., 2007). Likewise, the more parents perceived control over FCPs, the more competent and confident was their parenting beliefs (Dunst, Trivette, Boyd, & Brookfield, 1994; Dunst & Dempsey, 2007; Dunst, Hamby et al., 2007). Positive parenting beliefs, in turn, were related to parents' psychological well-being in a manner similar to what has been found in other studies (Dunst & Trivette, 2009; Dunst, Hamby et al., 2007; Dunst, Trivette & Raab, 2013; Trivette et al., 2010). That is, the pathways of influence found in our study illustrate how the effects of family-centered practices could be traced to more positive and less negative parent well-being in a manner similar to that found in other studies (Dunst & Trivette, 2009; Dunst, Hamby et al., 2007; King et al., 1999).

The indirect effects found in Study 2 are consistent with findings in previous research where the relationships between FCPs and child, parent, and family outcomes have been found to be mediated by different kinds of belief appraisals in a manner consistent with self-efficacy theory (Bandura, 1997). Parental attributions -like those investigated in the present research-have been found in other studies to mediate the relationship between FCPs and parent well-being (King et al., 1999), child well-being (Dunst & Trivette, 2009), parent-child interactions (Dunst, Espe-Sherwindt et al., 2019; Dunst, Hamby et al., 2019), and child behavior and development (Graves & Shelton, 2007; Trivette et al., 2010). The research described in this paper adds to this evidence base by demonstrating how the complex relationships among the variables in the study could be identified as evidenced by the direct, indirect, and total effects of the predictor variables on different mediator and outcome variables.

The manner in which we found FCPs to be directly and indirectly related to parent psychological well-being illustrate how practitioner help-giving practices are related to belief appraisals and in turn are related to health-related outcomes similar to what has been found in other studies (Bailey et al., 2007; Dunst et al., 2008). This was expected since the use of both relational and participatory FCPs has been found to have capacity-building characteristics and consequences (Dunst & Espe-Sherwindt, 2016). The characteristics include, but are not limited to, practitioner beliefs about existing family member strengths and the capacity to become more competent; informed family choice and decision-making; active family member involvement in achieving desired goals and outcomes; family member use of existing capabilities; and the development of new skills for obtaining desired resources and supports and achieving desired goals (Dunst & Espe-Sherwindt, 2016). The consequences include, but are not limited to, parents' beliefs about their ability to exercise control over important life events (e.g., Skinner & Greene, 2008), including parenting beliefs about their childrearing practices (Coleman, 1999; Newland, 2015). The results add to "the knowledge base regarding the role active help-receiver participation plays in people achieving desired life circumstances that in turn produce positive behavioral consequences in other domains of functioning" (Dunst et al., 2006a, p. 48). We therefore conclude that the results found in our studies provide evidence for the generalized effects of FCPs in samples in Spain in a manner similar to that found in other studies.

The belief appraisals that were the focus of this investigation have been used in other studies as measures of individual empowerment (Woodall, Raine, South, & Warwick-Booth, 2010) and psychological empowerment (Zimmerman & Rappaport, 1988). According to Singh (1995), individual empowerment is defined as "a process by which families access knowledge, skills, and resources that enable them to gain positive control over their own lives as well as improve the quality of their lifestyles" (p. 13, emphasis added). Self-efficacy beliefs have been used as a measure of control over practitioner help-giving practices (Trivette, Dunst, Boyd, & Hamby, 1995) and parenting beliefs have been used as a measure of control over executing parenting roles (Paczkowski & Baker, 2007). An empowerment perspective of efficacy beliefs helps explain how experiences afforded families (e.g., practitioner use of FCPs) "equip people with the requisite knowledge, skills, and resilient self-beliefs of efficacy to alter aspects of their lives over which

they can *exercise some control* (Ozer & Bandura, 1990, p. 472, emphasis added). These types of control belief appraisals influence families' abilities to cope, deal with, and affect life circumstances (Bandura, Caprara, Barbaranelli, Regalia, & Scabini, 2011; Skinner, 1995).

Placed within the context of empowerment theory, FCPs include capacity-building experiences that provide family members opportunities to use existing abilities and acquire new abilities in ways that positively affect their beliefs about control over important life events in ways that influence health-related outcomes. As noted by both empowerment (Rappaport, 1987) and self-efficacy (Bandura, 1997) scholars, belief appraisals function as mechanisms for explaining how competency-enhancing experiences afforded people are manifested in terms of improved psychological functioning (Diener & Biswas-Diener, 2005; Woodall et al., 2010). According to Tensky (2005), this necessitates a paradigm shift in terms of how we conceptualize and operationalize the ways in which professionals go about their work with help seekers.

#### 4.1. Limitations

There are at least three limitations that must be considered as part of the data interpretation. The first limitation has to do with the use of self-report measurement instruments, which may account for the nature of the relationships among the variables in both studies, and the fact that the data are cross-sectional and not longitudinal. This limitation concerns the degree of confidence for asserting causal relationships between the study measures (Asher, 1983; Kenny, 2004). This limitation is partly mitigated by the fact that the pattern of results in both studies are nearly identical to those reported in studies where there was time precedence between the belief appraisals and well-being measures (Dunst & Trivette, 2009; Dunst, Hamby et al., 2007).

A second limitation is the failure to include other measures in the analyses that might better explain the nature of the relationships among the variables in the SEMs (e.g., parenting styles of interaction; see especially Trivette et al., 2010). As noted by Tomarken and Waller (2005), such omissions may present a misleading depiction of how FCPs are directly and indirectly related to other variables of interest (see especially Trivette et al., 2010).

A third limitation relates to the fact that only one model was the focus of investigation where the model was informed by results from previous investigations. It could be the case that there are other models that better explain the relationships among the variables in the model. However, as noted by MacCallum (1995), "In a strictly confirmatory [SEM] strategy, the researcher constructs one model of interest and evaluates that model by fitting it to appropriate data. If the model yields interpretable parameter estimates and fits the data well, it is supported and considered a *plausible model* (p. 31, emphasis added).

## 5. Conclusion and implications for practice

The pattern of results in the SEMs provided empirical support for the contention that the way in which help is provided can either enhance or impede the intended outcomes of that help (Dunst, Trivette, & Hamby, 2007). The findings showed how the effects of FCPs on parent psychological well-being are indirect and mediated by self-efficacy beliefs and parenting competence and confidence beliefs. These results have a number of implications for practice.

The first implication has to do with an understanding of and the need to be clear about how FCPs are related to health-related outcomes. Parental well-being is recognized as an important family outcome of ECI (Bailey et al., 1998; Krauss & Jacobs, 1990). The effects of FCPs on parent psychological well-being, however, are primarily indirect and not direct, and it is important that practitioners have a clear understanding of how FCPs influence outcomes of interest, including, but not limited to, health-related outcomes (see e.g., Dunst et al., 2008).

The second implication has to do with the importance of using both relational and participatory FCPs and especially the use of participatory help-giving practices, if FCPs are going to have capacity-building consequences. The latter is the case because practices that actively involve parents in ECI are more likely to promote a sense of competence and confidence as hypothesized by Bandura (1997). Accordingly, ECI programs and practitioners that focus on the empowerment of families will need to place primary emphasis on using participatory practices that strengthen existing capabilities and promote the acquisition of new family member competencies (Dunst, 2010).

The third implication is not to assume that ECI programs and practitioners that claim to use FCPs, in fact, use these practices on a routine basis. Research has shown that ECI programs, organizations, and practitioners face many challenges and obstacles as part of adopting and using FCPs, and especially participatory practices (Dempsey & Keen, 2017; Dunst & Espe-Sherwindt, 2017). It is therefore hardly surprising that Dempsey and Keen (2017) noted that "effective implementation is the next major challenge for family-centered practices" (p. 65). Effective implementation includes, but is not limited to, the use of evidence-based professional development practices. Findings from a recently published study indicate that professional development specialist use of capacity-building professional development practices was related to practitioners' use of capacity-building FCPs (Dunst, Espe-Sherwindt et al., 2019; Dunst, Hamby et al., 2019). This demonstrates an empirical relationship between evidence-based implementation practices and evidence-based FCPs.

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## Declaration of Competing Interest

The authors declare no conflict of interest.

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