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META-ANALYSIS OF THE RELATIONSHIPS BETWEEN THE ADEQUACY OF FAMILY RESOURCES AND PARENTING BELIEFS AND PRACTICES

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ABSTRACT: *This meta-analysis includes an evaluation of the relationships between the adequacy of family resources and four parenting measures (beliefs, burden, engagement, and practices). Adequacy of family resources was hypothesized to be positively related to parenting beliefs, engagement, and practices and negatively related to parenting burden. Studies were eligible for inclusion if the Family Resource Scale was used to measure family resources, the total scale score was used to index the adequacy of family resources, one or more parenting belief or practices measures were used as outcome measures, and the correlations between the adequacy of family resources and the parenting measures were reported. Twenty-eight studies (including 30 independent samples of study participants) conducted between 1986 and 2019 met the inclusion criteria. The 30 samples included 5,247 study participants. Results showed that the adequacy of family resources was related to each of the four parenting measures as hypothesized and that child risk condition (children with or without identified disabilities or medical conditions and the number of items for computing a total family resource scale score moderated the strength of the relationships between family resources and parenting beliefs and practices. The findings are discussed in terms of the contributions to family systems theory and research. Several limitations of the meta-analysis are described.*

KEYWORDS: family resources, parenting beliefs, parenting burden, parent engagement, parenting practices, meta-analysis

INTRODUCTION

Bronfenbrenner (1979) contended that parents' abilities to "perform effectively in their child-rearing roles…and their evaluations of their own capacity to parent well" depends upon the adequacy of family resources and supports that provide parents the time and energy to carry out parenting responsibilities (p. 7). Family resources are one of a number of family process variables that influence parenting practices and child learning and development (Huston & Bentley, 2010; Osher et al., 2020). Accordingly, the presence of adequate family resources would be expected to provide increased opportunities to carry out parenting responsibilities. In contrast, the lack of family resources would be expected to interfere with opportunities to carry out parenting responsibilities.

Need theories include the contention that lack of family resources, and especially basic resources (lack of food, poor housing, money to buy necessities, etc.), motivates people to engage in activities to achieve

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needs fulfillment (e.g., Doyal & Gough, 1991; Pittman & Zeigler, 2007). The time and energy devoted to obtaining or procuring needed family resources often rob parents and other primary caregivers of the time to engage in parenting activities. Kerig (2019) noted that family-related factors such as a lack of family resources conflict with decisions about resource procurement and the needs of a developing child. The lack of family resources unrelated to carrying out parenting responsibilities is one factor associated with an inability to parent effectively (Bronfenbrenner, 1986; Shonkoff & Phillips, 2000).

Brooks-Gunn (1995) and Shonkoff and Phillips (2000) both noted the importance of the adequacy of family resources as a factor affecting parenting practices and the provision of development-enhancing child learning opportunities. The adequacy of family resources may be especially important in households where parents or other primary caregivers are rearing children at-risk for poor developmental outcomes due to child- or family-related factors or both. For example, the lack of family resources together with the birth and rearing of a child with an identified disability or complex medical condition may interfere with the additional attention required to parent effectively (Hodapp & Ly, 2005; Hogan & Msall, 2002). The lack of family resources in impoverished or low SES households, where considerable attention is often placed on procuring needed basic resources, is likely a factor that takes away time from effective parenting practices and engaging children in everyday learning opportunities (Floyd & Saitzyk, 1992; Kiernan & Mensah, 2011). Floyd and Saitzyk (1992) noted that limited family resources in low SES households "may create a disruptive context where parents are less able to respond to the unique needs of a child in a consistent manner" (p. 629).

Adequacy of family resources may affect several parenting-related beliefs and practices. Limited family resources have been found to be negatively related to parental beliefs about parenting capabilities (e.g., Dunst et al, 1988). The lack of family resources has also been found to be related to an increased sense of parenting burden (e.g., Kilmer et al., 2010) and less time to engage children in parent-child interactions and learning opportunities (e.g., Dinehart et al., 2006). As Floyd and Saitzyk (1992) hypothesized, limited family resources would also be expected to be related to less effective parenting practices (see e.g., Macais et al., 2007). The main purpose of meta-analysis described in this paper focused on the relationships between the adequacy of family resources and four parenting-related outcomes: Parental belief appraisals about parenting capabilities (e.g., Johnston & Mash, 1989), parenting burden associated with the care of a child (e.g., Stein & Jessop, 2003), parents' efforts to engage their children in parent-child interactions (e.g., Caldwell & Bradley, 1984), and parenting practices to promote child learning and development (e.g., Arnold et al., 1993).

Family Resources

Family resources have typically been conceptualized and operationalized either as social status measures (Citro & Michael, 1995; McLoyd, 1998) or a broad range of family and family member needs, supports, and strengths. Family resources measured in terms of social status include education, income, occupational status, and human capital (Brooks-Gunn, 1995; Shonkoff & Phillips, 2000). Family resources measured in terms of a broad range of family member needs, supports, and strengths include financial resources, food and shelter, plumbing and heating, medical and dental care, time for family and friends, child care, everyday

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material resources, dependable transportation and, and expendable income for entertainment and travel (Dunst & Leet, 1987; Rowland et al., 1985). Findings from several studies show that broadly defined measures of family resources account for significant amounts of variance in parenting measures beyond that associated with parent education, family income, and socioeconomic status (Dunst et al., 1988; Glesson et al., 2016; Smith et al., 2001).

The most widely used measure for assessing the adequacy of a broad range of family resources is the *Family Resource Scale* (FRS; Dunst & Leet, 1985). Need hierarchy theory guided the development of the scale and identification of the scale items (e.g., Alderfer, 1969; Hartman & Laird, 1983; Maslow, 1954). The scale includes 30 items for assessing the adequacy of basic resources (food, shelter, etc.), financial resources (good paying job, money to pay monthly bills, etc.) healthcare (medical and dental care for family members), childcare (babysitting, daycare, etc.), time to spend with family and friends), social support from kin, friends, etc., and expendable income (money for entertainment, travel, etc.). Each scale item is scored on a 5-point scale ranging from *not-at-all adequate* to *almost always adequate*. The sum of the item ratings provides a global measure of the adequacy of family resources.

There are 10 versions of the FRS that vary in terms of the total number of scale items (Dunst, 2021e). The psychometric analyses of the different versions of the scale show that coefficient alpha ranges between .77 and .94 (median = .92). The differences in the number of scale items (17 to 31) vary for conceptual, methodological, or procedural reasons (compare e.g., Dunst & Leet, 1987; Palermo et al., 2017; Van Horn et al., 2001). According to Brannan et al. (2006), the reduction in the number of scale items for other than theoretical reasons may eliminate potentially important sources of information for explaining variations in outcomes of interest to investigators.

Aims of the Study

Based on the conceptual foundations of the adequacy of family resources--parenting beliefs and practices relationships, tests of four primary hypotheses were the main focus of investigation:

1. Adequacy of family resources was expected to be positively related to parents' belief appraisals related to carrying out parenting responsibilities.
2. Adequacy of family resources was expected to be related to less perceived parenting burden.
3. Adequacy of family resources was expected to be related to parent-facilitated child engagement in parent-child interactions and child learning opportunities.
4. Adequacy of family resources was expected to be related to more positive parenting practices.

In addition to these four primary hypotheses, the meta-analysis also included assessment of whether (a) the strength of the relationships between the adequacy of family resources and the four parenting measures were similar or different, (b) child or family risk conditions differentially influenced the relationships between adequacy of family resources and the parent-related outcome measures, and (c) the number of FRS scale items used to compute a total scale score moderated the relationships between family resources and the four types of parenting beliefs and practices.

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The meta-analysis is part of a larger research synthesis of the relationships between the adequacy of family resources and different dimensions of personal, family, and child behavior and functioning (Dunst, 2021d, 2021e). The meta-analysis is also part of a line of research evaluating basic tenets of a family systems model for intervening with families of children with developmental disabilities or children at-risk for poor developmental outcomes for family-related conditions (Dunst, 2017).

METHODS

Approach

The guidelines and reporting standards described by Appelbaum et al. (2018) and Siddaway et al. (2019) were used to conduct the meta-analysis and report the results from the research synthesis. This included the methods to locate FRS studies, aggregate the results from the studies, conduct the analyses to test each study hypothesis, and report the results for the different sets of analyses. The study protocol is included in the supplemental report for this meta-analysis (Dunst, 2021d).

Search Strategy

Search Terms

Natural language searches were used to locate FRS studies since *family resources* is not a controlled vocabulary term in any of the thesauri of the databases used as search sources. Both "family resource scale" and "family resources scale" were first used to locate studies depending on the search source. The terms "family resource" or "family resources" AND "scale OR instrument OR inventory OR questionnaire" were also used to locate relevant studies. Both sets of searches were followed by searches for "adequacy of family resources" and "adequacy of resources" AND (the surnames of the first authors of 10 different FRS scales; Dunst, 2021d). Additional search terms were used as studies were located and related terms were used to describe the FRS or family resources were identified.

Search Sources

The primary search sources were PsycNET, ProQuest Central, ProQuest Theses and Dissertations, PubMed, ERIC (Educational Resource Information Center), and Google Scholar. The secondary search sources were ResearchGate, JSTOR, BASE, CORE, and DOAJ. Google was used to locate theses, dissertations, and other unpublished research reports not found in either the primary or secondary search sources.

Inclusion and Exclusion Criteria

Studies were included if (a) a FRS total scale score was used to measure the adequacy of family resources, (b) one or more parenting beliefs or practices measures were used as dependent variables, (c) the study participants were parents or other primary caregivers of children or adolescents birth to 18 years of age, (d) the parents or primary caregivers completed both the family resource scales and the parenting measures, and (e) the correlations between family resources and parenting were used as the metric for assessing the

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relationship between study measures. No limitation was placed on the type of research report, where the study was conducted, or the year of publication.

Studies were excluded if (a) the correlations between family resources and parenting were not reported, (b) incomplete correlations between measures were reported, (c) correlations were reported only as nonsignificant, or (c) the study participants were not primary caregivers in households with children at-risk for poor outcomes.

Data Preparation

The input for each family resource scale—parenting measure relationship was the correlation coefficient and sample size in each study. The dependent measures were categorized as parenting beliefs, parenting burden, parent engagement, or parenting practices based on the attributional targets of the parenting scale items (Bugental et al., 1998).

The direction of the correlation coefficients for the relationships between family resources and the parenting measures could be either positive or negative depending on the parenting measures used by the primary study investigators. For example, the adequacy of family resources would be expected to be positively related to parenting self-efficacy beliefs but negatively related to parenting burden measures. In the latter cases, the signs of the correlation coefficients were reversed so that the effect sizes for the relationships between higher family resource scale scores indicated better parenting beliefs and practices. All analyses were performed with Fisher *r*-to-*z* transformations which were transformed back to zero-order correlation coefficients for reporting purposes.

Methods of Analysis

Meta-Essentials was used to perform the meta-analysis (Suurmond et al., 2017; Van Rhee et al., 2015). This included publication bias analyses, effect size aggregation, between parenting measure comparisons, and moderator analyses. Random effects models were used in all analyses because of the heterogeneity of the studies in terms of the study participants, child and family life events and conditions, and the differences in the scales used to measure parenting beliefs and practices.

Publication Bias

The Egger regression test and Begg and Mazumber rank-order correlation test were used to assess the presence of publication bias. Separate analyses were done for each type of parenting measure. Nonsignificant test results indicate no publication bias (van Aert et al., 2019).

Effect Size Estimates

The average, weighted correlations between the total FRS scores and each type of parenting measure were used to estimate the strength and the relationships between measures. Separate analyses were performed for parenting beliefs, parenting burden, parent engagement, and parenting practices.

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The output for each analysis included the number of studies in an analysis (k), the total number of study participants (N), the average, weighted effect size (*r*) for the relationship between family resources and the parenting measures, the 95% confidence interval (CI) for the average effect sizes, the *Z*-test for determining if the average effect size differs significantly from zero, and the *p*-value associated with the effect sizes.

Between Type of Parenting Measure Comparisons

$Q_{Between}$ (Q_B) was used to determine if the sizes of effects for the relationship between the adequacy of family resources and the four different parenting measures were the same or different. Q_B is analogous to a one-way between-group ANOVA for effect size data (Hedges, 1994). Post-hoc tests were conducted, as warranted, to ascertain any between type of parenting measures differences.

Moderator Analyses

Q_B was also used to assess whether the strength of the relationship between family resources and the parenting measures varied as a function of child and family risk conditions. The risk conditions included children with identified disabilities or established developmental delays (e.g., Autism; Speech and Language Delays), children with social and behavioral difficulties (e.g., Mental Health or Behavioral Problems), children with medical conditions (e.g., Neural Tube Defects; Myelomeningocele), and children at risk for poor outcomes due to family-related factors (e.g., children in Early Head Start Programs; single, adolescent parents raising their children). The fifth group of children was at no risk or low risk for poor developmental outcomes.

Weighted linear regression analysis was used to determine if the number of FRS items moderated the relationship between the adequacy of family resources and the parenting measures. The sizes of effects between family resources and the parenting measures were regressed on the number of FRS items used to compute a total scale score to detect any moderator effect.

RESULTS

Study Selection

The process for identifying, screening, and determining papers eligible for inclusion in the meta-analysis is shown in Figure 1. The large number of papers excluded after duplicates were removed were either not studies or were studies that did not include the correlations between FRS total scale scores and one or more parenting measures (e.g., between-group comparative studies). One hundred fifteen (115) of the 143 full-text papers evaluated for eligibility were excluded for the reasons shown in Figure 1. Twenty-eight (28) research reports met the inclusion criteria and included 30 independent samples of study participants. The 30 samples were considered the number of studies for purposes of conducting the meta-analysis. The total number of study participants was 5,247.

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Study and Participant Characteristics

Table 1 shows selected characteristics of the studies in the meta-analysis. The individual study and study participant characteristics are included in the supplemental report for the meta-analysis (Dunst, 2021d).

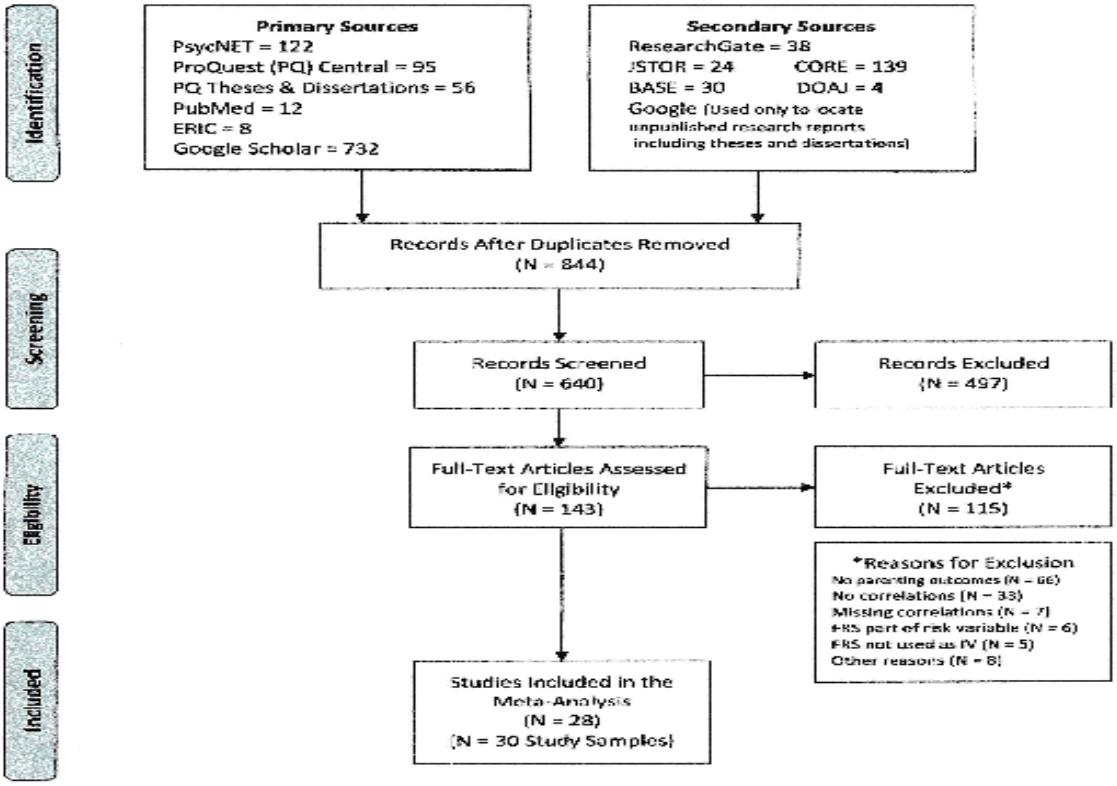

Figure 1. Flow chart for the identification of studies reporting the correlations between the adequacy of family resources and parenting beliefs and practices. (Adapted from Moher et al., 2009).

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Three-fourths of the studies were conducted between 2000 and 2019. The majority of studies (70%) included 150 or fewer study participants. All but three studies were conducted in the United States (90%). Most studies (60%) were published in peer-reviewed journals. The other studies were found in five different sources (unpublished research reports, theses, and conference proceedings).

Table 1: *Selected Characteristics of the Family Resource Scale Studies*

Study Characteristics	Number of Studies	Percent of Studies
Year of Research Report		
1986-1999	7	23.3
2000-2009	11	36.7
2010-2019	11	36.7
Not Reported	1	3.3
Sample Size		
21-50	6	20.0
51-100	8	26.7
101-150	7	23.4
151-200	2	6.7
201-300	4	13.3
500-992	3	10.0
Location of Studies		
United States	27	90.0
India	2	6.7
Canada	1	3.3
Type of Research Reports		
Peer Reviewed Journal Articles	18	60.0
Unpublished Research Reports	4	13.3
Master Theses	3	10.0
Doctoral Dissertations	2	6.7
Conference Proceedings	2	6.7
Honors Thesis	1	3.3

Selected characteristics of the study participants and their children are shown in Table 2. Mothers were the primary study participants in 75% of the studies with half of the studies including only mothers. In those studies reporting marital status, less than 75% of the participants were married or living with a partner.

The participants' ages ranged between 17 and 56 with the majority (63%) being between 26 and 40 years of age. In studies including the years of formal education completed by the participants, two-thirds completed between 13 and 17 years of school.

Most of the participants' children were either preschoolers or elementary-age with the majority between birth and 5-years-of-age. Most of the children (70%) had identified disabilities or developmental delays.

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Table 2: *Selected Characteristics of the Study Participants and the Participants' Children*[a]

Background Characteristics	Number of Studies	Percent of Studies
Gender		
Mothers (100%)	16	53.3
Mothers (75-99%)	7	23.4
Fathers (100%)	2	6.7
Grandmothers (100%)	1	3.3
Mixed Samples[b]	4	13.3
Percent Married		
<25	4	13.3
25-50	2	6.7
51-75	5	16.7
76-90	5	16.7
100	2	6.7
Not Reported	12	40.0
Mean Age (Years)		
17-25	3	10.0
26-30	8	26.7
31-35	6	20.0
36-40	5	16.7
41-56	4	13.3
Not Reported	4	13.3
Mean Years of School Completed		
9-10	5	16.7
11-12	4	13.3
13-14	10	33.3
15-17	7	23.3
Not Reported	4	13.3
Mean Child Age (Years)		
0-5	15	50.0
6-11	9	30.0
12-16	3	10.0
Not Reported	3	10.0
Child Gender		
Male (>60%)	5	16.7
Mixed (40-60%)	12	40.0
Female (>60%)	2	6.7
Not Reported	11	36.7
Child/Family Life Event or Condition		
Children with Identified Disabilities	12	70.0
Children with Medical Conditions	7	23.3
Children in At-Risk Households	5	17.7
Children with Emotional Problems	3	10.0
Children at No or Low Risk	3	10.0

[a]See Dunst (2021d) for the characteristics of the study participants in individual studies.
[b]Includes both the children's mothers and other family members or relatives (e.g., fathers, grandparents).

There were five subgroups of children, with three subgroups with identified conditions (disabilities, medical conditions, and behavioral concerns) and two subgroups without identified conditions (at-risk due to low SES status and no or low risk).

Study Measures

Family Resources

Five different versions of the FRS were used in the studies where the total scale scores were used to measure the adequacy of family resources (Dunst & Leet, 1985; Leet & Dunst, 1988; Patwardhan et al., 2019; Taylor, 1999; Van Horn et al., 2001). The number of items used to measure the adequacy of family resources ranged between 17 and 31 (see the Appendix).

Parenting Measures

The scales used to measure the four different parenting beliefs and practices are shown in Table 3. Twenty-five different scales or subscales were used to measure parenting beliefs and practices.

Table 3: *Scales Used to Measure Parenting Beliefs and Practices in the Family Resource Scale Studies*

Parenting Measures	Sources	# of Studies
Parenting Beliefs		
Parenting Sense of Competence Scale	Johnston and Mash (1989)	2
Parenting Attitudes Toward Child Rearing Scale	Easterbrooks and Goldberg (1984)	2
Maternal Beliefs Rating Scale (ID)	Persha and Rao (2003)	2
Parenting Efficacy Scale	Duke et al. (1996)	1
Parenting Time Commitment Scale	Dunst and Trivette (1986)	1
Parental Commitment to Childrearing Scale (ID)	Dunst et al. (1986)	1
Parenting Role Construction Scale	Sheldon (2002)	1
Parenting Locus of Control Scale (IA)	Engelke (1991)	1
Parenting Burden		
Impact on Family Scale	Stein and Riessman (1980)	3
Caregiver Strain Questionnaire	Brannan et al. (1997)	2
Parenting Daily Hassles Scale	Crnic and Greenberg (1990)	2
Caregiver Strain Index	Luescher et al. (1999)	1
Parent Engagement		
Home Observation for Measurement of the Environment (HOME) Scale	Caldwell and Bradley (1984, 2003)	5
Family Routines Inventory	Jensen et al. (1983)	3
Parent Involvement in the Home Scale (ID)	Anderson and Minke (2007)	1
Parent and Child Activities Scale (ID)	Weigel et al. (2010)	1
Children's Engagement Questionnaire	McWilliam (1991)	1
Parenting Practices		
PSI Parent-Child Interaction Subscale	Abidin (1990, 1995, 2012)	6
Nursing Child Assessment Teaching Scale	Barnard (1978)	1
HOME Parental Responsiveness Subscale	Caldwell and Bradley (1984)	1
Parenting Scale	Arnold et al. (1993)	1
PFS Nurturing and Attachment Subscale	Counts et al. (2010)	1
PWS Nurturing Caregiving Subscale	Wyman et al. (1999)	1
PSI Parenting Competence Subscale	Abidin (1983)	1
Parenting Styles Scale	Buri (1991)	1

NOTES. PSI = Parenting Stress Index, PFS = Protective Factors Survey, PWS = Parental Warmth Scale, ID = Investigator developed, and ID = Investigator adapted.

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The parenting belief measures included participants' judgments of their abilities or roles for carrying out parenting responsibilities. The parenting burden measures included participants' judgments of the strains and stresses associated with child-rearing.

The parent engagement measures included participants' efforts to engage children in everyday family or child learning activities. The parenting practices measures included participants' behavior used to enhance and promote child competence while engaged in parent-child interactions.

Effect Size Data

The Appendix includes the data that was used to conduct the analyses of the relationships between the adequacy of family resources and parenting beliefs and practices for each study including the necessary independent and dependent measures. The Appendix also includes the sample size in each study, the FRS used to measure the adequacy of family resources, the number of items used to compute a total FRS score, the scales used to measure parenting beliefs and practices, the size of effect (correlation coefficient) between family resources and the parenting measures, and the 95% confidence interval for the sizes of effect.

Publication Bias

Table 4 shows the results of the publication bias analyses for each of the parenting measures. The average sizes of effects and 95% confidence intervals for the observed and adjusted *z*-scores were much the same. Both the Egger regression results and Begg-Mazumber rank-order correlation test results indicated no publication bias.

Table 4: *Results of the Publication Bias Analyses*

	Observed Average *z*		Adjusted Average *z*		Egger Regression Test		Begg-Mazumber Rank-Order Test	
Outcome Measures	***z***	**95% CI**	***z***	**95% CI**	***t*-test**	***p*-value**	***Z*-test**	***p*-value**
Parenting Beliefs	.22	.15, .29	.17	.11, .24	1.86	.100	1.95	.052
Parenting Burden	.33	.25, .40	.29	.22, .35	1.38	.220	0.37	.711
Parent Engagement	.26	.20, .33	.26	.20, .33	1.21	.260	1.48	.139
Parenting Practices	.29	.25, .33	.29	.25, .32	0.47	.650	1.59	.112

NOTE. z = Fisher's transformation of the correlation coefficients.

Relationships Between Family Resources and Parenting Beliefs and Practices

The average weighted sizes of effects for the relationships the adequacy of family resources and each parenting measure and all measures combined are shown in Table 5. All five sets of results were statistically significant as evidenced by the *Z*-test results and associated *p*-values. The average sizes of effects ranged between .24 (parenting beliefs) and .33 (parenting burden) where the confidence intervals between parenting beliefs and practices overlapped for all four measures. The results indicate that the adequacy of family resources was associated with more positive parenting beliefs and less parenting burden, and more effort to engage children in learning activities and promote child learning while involved in the activities.

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Table 5: *Average Weighted Effect Sizes for the Relationships Between Adequacy of Family Resources and Parenting Beliefs and Practices*

Parenting Measures	k	N	*r*	95% CI	*Z*-Test	*p*-value
All Parenting Measures Combined	44	6754	.28	.24, .32	13.44	.000
Parenting Beliefs	11	1039	.24	.12, .35	4.35	.000
Parenting Burden	8	1102	.33	.24, .42	7.74	.000
Parent Engagement	11	1319	.27	.18, .36	6.28	.000
Parenting Practices	14	3294	.29	.23, .35	9.33	.000

The four between type of parenting measures comparison was nonsignificant, $Q_B = 2.38$, $df = 3,40$, $p = .498$. The result indicates that the strength of the relationships between the adequacy of family resources and the four parenting measures were similar. Examination of Table 5, however, shows that the size of effect for parenting beliefs is smaller compared to that for the other three parenting measures. Post-hoc tests were conducted to determine if these differences were of sufficient magnitude to constitute a differential effect. A three between type of parenting measure comparison without parenting beliefs as a between factor was nonsignificant, $Q_B = 1.08$, $df = 2,30$, $p = .583$. A two between type of parenting measure comparison (beliefs vs. burden + engagement + practices) was also nonsignificant, $Q_B = 1.24$, $df = 1,42$, $p = .266$. The different sets of analyses yielded converging evidence that the strength of relationships between the adequacy of family resources and parenting beliefs, burden, engagement, and practices were more similar than different.

Moderator Effects

Between Child Group Comparisons

Table 6 shows the results for the relationships between the adequacy of family resources and the parenting measures for five subgroups of children with identified conditions and one group of children without identified conditions. The five between child group comparison was statistically significant, $Q_B = 13.07$, $df = 3,38$, $p = .011$. The sizes of effects between family resources and parenting were larger for the three groups of children with identified conditions compared to the children with no identified conditions.

Table 6: *Average Weighted Effect Sizes for the Relationships Between Adequacy of Family Resources and Parenting Beliefs and Practices for Different Groups of Children*

Child Conditions	k	N	*r*	95% CI	*Z*-Test	*p*-value
Children with No Identified Conditions	9	1272	.18	.17, .19	5.03	.000
Children At No or Low Risk for Poor Outcomes	3	636	.18	.02, .37	3.88	.000
Children in Low SES/Impoverished Households	6	636	.17	.03, .31	7.26	.000
Children with Identified Conditions	34	5325	.32	.28, .35	15.03	.000
Children with Identified Disabilities or Delays	18	3586	.34	.28, .40	17.31	.000
Children with Health-Related Medical Conditions	12	1129	.30	.23, .36	8.17	.000
Children with Behavioral-Emotional Disturbances	4	610	.29	.11, .46	10.61	.000

Post-hoc tests found no significant differences between family resources and parenting for either the three groups of children with identified conditions, $Q_B = 1.10$, $df = 2,31$, $p = .576$ or the two groups of children without identified conditions, $Q_B = 0.03$, $df = 1,7$, $p = .864$. A two between child group comparison (children

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with identified conditions vs. children with no identified conditions) was statistically significant, Q_B = 10.15, *df* = 1,41, *p* = .001. The pattern of results indicated that the adequacy of family resources may be more important in households where parents and other primary caregivers are rearing children with identified disabilities or medical conditions.

Number of Family Resource Scale Items

The analysis of the relationships between the adequacy of family resources and the parenting measures regressing the sizes of effects on the number of FRS items was statistically significant, Q_B = 6.40, *df* = 1,42, *p* = .011. The results showed that an increase in one FRS item for computing a total scale score was associated with a quarter-point increase in the parenting measures scores, β = .25, *Z* = 2.53, *p* = .011.

DISCUSSION

Results from the meta-analysis provide support for all four study hypotheses. Adequacy of family resources was related to more positive parenting beliefs about child-rearing responsibilities, less parenting burden associated with child-rearing responsibilities, more effort to engage children in learning activities, and more positive parent-child interactions and parenting practices. The results are consistent with Bronfenbrenner's (1979) contention that the adequacy of family resources is one family systems factor that is related to parents' beliefs and practices. The findings also point to the importance of family resources as a factor associated with the ability to carry out parenting roles and responsibilities in a competent manner (Brooks-Gunn, 1995; Shonkoff & Phillips, 2000).

The strength of the relationships between the adequacy of family resources and the four different parenting measures were much the same as evidenced by a nonsignificant between type of parenting measure comparison and the post-hoc tests. The results indicate that family resources are related to the four parenting measures in similar ways. Adequacy of family resources, therefore, had similar influences on parents' judgments of their beliefs about parenting capabilities and their interactions with their children.

Results for the analysis of the effects of child and family risk factors on the sizes of effect between family resources and parenting beliefs and practices showed that the strength of the relationships among the independent and dependent measures was larger for children with identified conditions compared to children with no identified conditions. This difference is most likely related to the added stress and strain associated with the birth and rearing of a child with a disability or complex medical condition (e.g., Neece & Chan, 2017; Pinquart, 2018) and the role family resources play in mitigating or moderating the effects on parenting beliefs and practices (e.g., Glesson et al., 2016; Hogan & Msall, 2002).

The number of FRS items used to compute a total family resources score was related to the strength of the relationship between adequacy of family resources and the parenting measures. The larger the number of scale items used to compute a total FRS score, the larger the size of effect between the independent and dependent measures. This result provides support for Brannan et al's. (2006) contention that limiting the number of FRS items used to measure the adequacy of family resources decreases the power to detect the influence of family resources on parenting beliefs and practices.

Contributions to Theory and Research

Brooks-Gunn (1995), Shonkoff and Phillips (2000), and others (e.g., Bornstein & Bradley, 2012; Dunst et al., 2017) have noted the importance of family socioeconomic status as a factor affecting parenting beliefs and practices. Findings from the meta-analysis add to this knowledge base by demonstrating that other types of family resources also are related to differences in parenting beliefs and practices. These other types of resources include such things as the adequacy of food and shelter, healthcare, social supports, dependable transportation, childcare, and other resources that provide parents the time to carry out child-rearing responsibilities (Bronfenbrenner, 1979). As found by other researchers (e.g., Dunst et al., 1988; Glesson et al., 2016; Smith et al., 2001), the adequacy of broadly defined family resources accounts for variations in parenting beliefs and practices beyond that associated with social status measures of family resources (education, income, and occupational prestige; e.g., Citro & Michael, 1995; McLoyd, 1998).

Family and social systems provide conceptual frameworks for understanding the sources of variations in human growth and development (e.g., Bronfenbrenner, 1992; Combrinck-Grahm, 1990; Emery, 2014; Walsh, 1994). Kerig (2019) and Cox and Paley (1997) both used family systems theory to help identify the family- and systems-related factors associated with variations in the development of parenting competencies and practices. Dunst (2017) used social and family systems theories to develop a family systems intervention model that includes different intrafamily and extrafamily practices that can be used to influence parent, family, and child behavior and functioning. The provision or mobilization of family resources is one of these practices that is seen as a necessary condition for parents to effectively carry out parenting responsibilities. The meta-analysis described in this paper is part of a line of applied research that has included empirical tests of basic tenets of the family systems intervention model (e.g., Dunst, 2021a, 2021b, 2021d, 2021e, 2021f; Dunst et al., 1997, 2007, 2008, 2021c). The findings reported in this paper are consistent with one tenet of the family systems intervention model.

Further tests of the family systems intervention model will include evaluation of the differential effects of different types of family resources (basic resources, time availability, financial resources, etc.) on parent, family, and child functioning. This will permit evaluation of whether different types of family resources behave in similar or different ways in terms of explaining variations in different dimensions of parent, family, and child functioning. (Dunst, 2021f), for example, found that different types of family strengths were differentially related to parent and family well-being. These types of analyses help identify which family-related factors account for the largest amount of variance in outcomes of interest.

Limitations

Several limitations are noted to place the methods and results in procedural context. The main limitation of the meta-analysis has to do with the scales used to measure parenting beliefs and practices (Table 3). Very few investigators used the same scales to measure parenting beliefs, burden, engagement, or practices which might account for variations in the sizes of effect between family resources and the parenting measures (Appendix). A related limitation is that some parenting scales may be proxy measures for the parenting constructs examined in the meta-analysis. For example, the scales used to measure parenting practices

include both self-report measures (e.g., Abidin, 2012) and observational measures (e.g., Caldwell & Bradley, 1984). This as well might account for differences in the sizes of effects between family resources and the parenting measures.

A third limitation is due to the correlational data were used for the meta-analysis. This always raises questions about causal relationships between independent and dependent variables. This limitation is partly mitigated by the fact that the family systems theory guiding the conduct of the meta-analysis includes the tenet that adequacy of family resources is one family-related factor that is hypothesized to influence parents' abilities to carry out parenting responsibilities (Bronfenbrenner, 1979).

CONCLUSION

Results from the meta-analysis are consistent with a basic tenet of the family system intervention model that guided the conduct of the study (Dunst, 2017) that the adequacy of family resources in households of children with and disabilities or medical conditions which covary with different parenting beleifs and practices.

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Appendix

Measures and Effect Size Data Used for the Meta-Analysis of the Relationships Between Adequacy of Family Resources and Parenting Beliefs and Practices

		FRS[a]			Effect Sizes[c]	
Study	**N**	**Scale**	**#**	**Parenting Measures[b]**	***r***	**95% CI**
Parenting Beliefs						
Anderson & Minke (2007)	203	DL	30	Role Construction Scale	.27	.14, .39
Armans (2014)	46	DL	30	Parenting Sense of Competence Scale	.29	-.01, 54
Brody et al. (1999)	139	DL	17	Parenting Efficacy Scale	.16	-.01, .32
Candelaria 2006)	103	DL	22	PATCRS Warmth Subscale	.09	-.11, .28
Dunst et al. (1986)	21	DL	30	Childcare Commitment Scale	.54	.11, .80
Dunst & Leet (1987)	45	DL	30	Time Allocation Scale	.63	.41, .78
Engelke (1991)	106	DL	30	Parenting Locus of Control Scale	.31	.12, .47
Lindsey & Barry (2018)	157	DL	30	Parenting Sense of Competence Scale	.08	-.08, .23
Persha & Rao (2003) 1	51	VH	22	Maternal Beliefs Rating Scale	.28	.00, .52
Persha & Rao (2003) 2	54	VH	22	Maternal Beliefs Rating Scale	.14	-.14, .40
Whittaker et al. (2011)	114	DL	30	PATCRS Warmth Subscale	.12	-.07, .30
Parenting Burden						
Balakrishnan et al. (2011)	152	LD	31	Impact on Family Scale	.44	.30, .47
Dinehart et al. (2006)	56	DL	30	Parenting Daily Hassles Scale	.23	-.04, .47
Grunberg (2016)	199	VH	21	Impact on Family Scale	.24	.10, .37
Kilmer et al. (2010)	100	DL	30	Caregiver Strain Index	.34	.15, .50
Koroloff et al. (2001)	110	DL	30	Caregiver Strain Questionnaire	.44	.27, .58
Patwardhan et al. (2019)	30	PT	28	Caregiver Strain Questionnaire	.20	.09, .31
Vohr et al. (n.d.)	100	DL	30	Impact on Family Scale	.48	.31, .62
Weigel et al. (2010)	85	DL	30	Parenting Daily Hassles Scale	.30	.09, .48
Parent Engagement						
Anderson & Minke (2007)	118	DL	30	Parent Involvement in the Home Scale	.11	-.03, .24
Budescu et al. (2018)	115	VH	18	Family Routines Inventory	.06	-.13, .24
Dinehart et al. (2006) 1	56	DL	30	HOME	.28	.01, .51
Dinehart et al. (2006) 2	56	DL	30	Family Routines Inventory	.40	.15, .60
Engelke et al. (1991)	106	DL	30	HOME	.26	.07, .43
Kelley et al. (2011)	230	LD	31	HOME	.17	.04, .29
McWilliam (2005)	277	DL	30	Child Engagement Questionnaire	.36	.25, .46
Persha & Rao (2003) 1	51	VH	22	HOME	.32	.04, .55
Persha & Rao (2003) 2	54	VH	22	HOME	.54	.31, .71
Weigel et al. (2010) 1	85	DL	30	Parent and Child Activities Scale	.32	.11, .50
Weigel et al. (2010) 2	85	DL	30	Family Routines Inventory	.33	.12, .51
Parenting Practices						
Armans (2018)	46	DL	30	Parenting Scale	.50	.24, .69
Conrad-Hieber et al. (2015)	133	DL	19	PFS Nurturing Subscale	.30	.14, .45
Engelke (1991)	106	DL	30	PSI Parent Competence Subscale	.27	.08, .44
Kilmer et al. (2010)	100	DL	30	PWS Nurturing Subscale	.23	.03, .41
Levine (2010)	26	DL	30	PSI Parent-Child Interaction Subscale	.44	.04, .72
Macias et al. (2007) 1	71	DL	30	PSI Parent-Child Interaction Subscale	.35	.12, .54
Macias et al. (2007) 2	71	DL	30	PSI Parent-Child Interaction Subscale	.26	.02, .47
Palisano et al. (1993)	36	DL	30	NCATE	.36	.02, .62
Pratt (1992)	572	DL	30	PSI Parent-Child Interaction Subscale	.45	.38, .51
Smith et al. (2001)	880	DL	30	PSI Parent-Child Interaction Subscale	.22	.16, .28
Sneyd (2005)	49	DL	30	Parenting Styles Scale	.15	-.14, .42
Taylor et al. (1993)	990	TY	28	PSI Parent-Child Interaction Subscale	.24	.18, .30
Vohr et al. (n.d.)	100	DL	30	PSI Parent-Child Interaction Subscale	.33	.14, .50
Whittaker et al. (2011)	114	DL	30	HOME Parental Responsiveness Subscale	.10	-.09, .28

[a]FRS = Family Resource Scale, # = Number of scale items, DL = Dunst and Leet (1985), LD = Leet and Dunst (1988), PT = Patwardhan et al. (2019), TY = Taylor (1999), and VH = Van Horn et al. (2001).

[b]See Table 2 for the sources of each of the parenting measures. PATCRS = Parenting Attitudes Toward Child Rearing Scale, HOME = Home Observation of Measurement of the Environment Scale, PFS = Protective Factors Survey, PSI = Parenting Stress Index, PWS = Parental Warmth Scale, and NCATE = Nursing Child Assessment Teaching Scale.

[c]CI = Confidence intervals for the effect sizes between the family resources measures and the parenting measures.

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