META-ANALYSIS OF THE RELATIONSHIPS BETWEEN THE ADEQUACY OF FAMILY RESOURCES AND PERSONAL, FAMILY AND CHILD WELL-BEING

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ABSTRACT

This meta-analysis includes evaluations of the relationships between the adequacy of family resources and seven dimensions of personal, family, and child well-being. Adequacy of family resources was expected to be related to enhanced positive well-being and attenuated negative wellbeing. Studies were eligible for inclusion if the Family Resource Scale was used to measure family resources, the total scale score was used to measure the adequacy of family resources, one or more personal, family, or child well-being measures was used to assess psychological functioning, and the correlations between the adequacy of family resources and well-being were reported. Fortyfour research reports met the inclusion criteria and included 50 independent samples of study participants (N = 8,183). The studies were conducted in six different countries between 1986 and 2019. Results showed that adequacy of family resources was positively related to all seven personal, family, and child well-being measures. The findings provide support for the contention that the adequacy of family resources would be related to enhanced positive and attenuated negative wellbeing. The strength of the relationships between family resources and the different dimensions of well-being differed as a function of child risk condition but not the number of family resource scale items used to measure the adequacy of family resources. The results are consistent with the basic tenets of different family systems models. Both the strengths and limitations of the research synthesis are described.

Keywords: Family resources, personal well-being, family well-being, child well-being, meta-analysis

INTRODUCTION

Needs theories include a basic tenet that unmet needs motivate or engage people to pursue resources to achieve needs satisfaction or fulfillment (Alderfer, 1969; Deci & Ryan, 1985; Maslow, 1943; Max-Neef, 1987). A need is a judgment about something desired or lacking but wanted or required to achieve a goal or attain a particular end state or condition (Dunst et al., 1988b; Gasper, 2007). Resources include the physical, social, psychological, and financial supports that satisfy needs or are used to attain desired goals (Hesse-Biber & Williamson, 1984). According to Deci and Ryan (2000), the "satisfaction of needs...is associated with *psychological well-being*, whereas failure to satisfy needs is associated with deficits in well-being" (p. 233).

Well-being is an umbrella construct that includes multiple dimensions of psychological health and behavior (e.g., Disabato et al., 2016; Leon & Nunez, 2013). This includes both positive (e.g., life satisfaction, positive affect, happiness) and negative (e.g., depression, stress, anxiety, negative affect) dimensions of well-being. Needs theories include the hypothesis that needs satisfaction would be expected to be related to enhanced positive well-being and attenuated negative well-being. Findings from research syntheses of studies of the resource procurement--need satisfaction-enhanced well-being relationships provide support for these hypothesized relationships (e.g.,

Cerasoli et al., 2016; Ryan & Deci, 2001; Yu et al., 2018). Results from these syntheses show that the pursuit of resources to attain goals or desired end states that resulted in successful goal attainment was associated with more positive and less negative well-being (e.g., Hobfoll, 2002; Klugg & Maier, 2015; Koestner et al., 2002).

Most needs theories emphasize the role an individual's psychological resources (hardiness, self-efficacy, optimism, positive thoughts, etc.) play in explaining variations in individual well-being and related psychological outcomes (e.g., Lightsey, 1996). Family systems theories and models, in contrast, focus on the role family resources, supports, and strengths play in affecting personal, family, and child well-being (Bronfenbrenner, 1979; B. E. Johnson & Ray, 2016; McCubbin & Patterson, 1983). The McCubbin and Patterson (1983) family systems model, for example, includes explicit attention to the role family resources play in buffering families from the adverse effects of stressful life events and in enhancing family and individual family member health and well-being (Lavee et al., 1985).

Family Resources and Well-Being

As noted by Walsh (1994), family system theory and research "seeks to identify the family strengths and resources that are critical for mastering life challenges and promoting the well-being and healthy development of individual family members...and well-functioning families" (p. 175). Family resources include "anything one individual family member can offer another [family member] to help that person *satisfy a need or attain goals*" (Hesse-Biber & Williamson, 1984, p. 262; italics added). Family resources are hypothesized to be one of a number of family systems factors that influence personal, family, and child well-being and psychological health (Brooks-Gunn, 1995; Walsh, 1994). These family-related factors include, but are not limited to, family relationships (Scabini, 2016), family strengths (DeFrain & Stinnett, 2002), family hardiness (Clark, 2002), family cohesion and adaptability (Lavee et al., 1985), and family support (Pierce et al., 2013).

Family resources can be categorized along a continuum from narrowly defined resources to broadly defined resources. Narrowly defined family resources are typically operationalized in terms of social status (e.g., income, education, and occupational prestige; Citro & Michael, 1995; McLoyd, 1998). Broadly defined resources are operationalized in terms of the adequacy of basic (food, shelter, etc.), financial (money to pay bills, good job, etc.), healthcare (medical, dental, etc.), time availability (time for family and children, etc.), childcare (babysitting, preschool, etc.), social support (spouse or partner, friends, etc.), expendable income (entertainment, travel, etc.), and other kinds of family resources (e.g., Dunst & Leet, 1987; Rowland et al., 1985). Along the continuum between narrowly and broadly defined resources, family resources have been operationalized in terms of family and family member relationships, attributes, and characteristics (e.g., cohesion, adaptability, coping, communication, strengths; Lavee et al., 1985; Scabini, 2016).

Findings from studies of the relationships between family resources and different dimensions of personal, family, and child well-being indicate that regardless of how family resources are operationalized, resources are related to variations in family and family member well-being (see e.g., Brooks-Gunn, 1995; Fink, 1995; Scabini, 2016). Studies of the relationships between different predictor variables and well-being show that measures of broadly defined family resources account for larger amounts of variance in psychological functioning compared to other predictor variables (e.g., Eshbaugh et al., 2006; Gleeson et al., 2016; Koroloff et al., 2002; Paley et al., 2006). Results from several studies indicate that broadly defined measures of family resources account for significant amounts of variance in well-being beyond that associated with narrowly defined measures of family resources (e.g., Dunst & Leet, 1987; Smith et al., 2001). Findings from both of these studies indicated that broadly defined measures of family resources accounted for significant amounts of variance in personal and child well-being beyond that associated with family income, education, and socioeconomic measures of family resources.

Adequacy of Family Resources Measures

Two scales have been developed to assess the adequacy of family resources that include a broad range of resources (Dunst & Leet, 1985; Rowland et al., 1985). The *Perceived Adequacy of Resources Scale* (Rowland et al., 1985) assesses the adequacy of family resources that are hypothesized to be related to family quality of life but too few studies have been conducted to evaluate these relationships to be meta-analyzed. The *Family Resource Scale* (Dunst & Leet, 1985) assesses the relationship between the adequacy of family resources and different dimensions of well-being in households with young children or adolescents (Dunst & Leet, 1987; Dunst et al., 1986b, 1988a). The scale has been widely used to evaluate the covariation between family resources and different dimensions of well-being as described in this paper.

The Family Resource Scale (FRS) 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 (daycare, babysitting, etc.), time for family and friends, social support (kin, friends, etc.), and expendable income (money for entertainment, travel, etc.). A person completing the scale score each item on a 5-point Likert scale ranging from not-at-all adequate to almost always adequate. The sum of the scale item ratings is a global measure of the adequacy of family resources.

There are 10 versions of the FRS which differ in terms of the number of scale items and the number of subscales (Table 1). The number of scale items and subscales varies for conceptual, methodological, or procedural reasons (compare e.g., Dunst & Leet, 1987; Palermo et al., 2017; Van Horn et al., 2001). Psychometric analyses of the different versions of the scale show that the FRS is both a reliable and valid measure for assessing the adequacy of family resources. Table 1 shows the internal consistency estimates for the total FRS scores and the correlations between those scores and the personal well-being of the participants in the different FRS studies.

Table 1: Different Versions of the Family Resource Scale

| | | Numbe | | | |
|------------------------------------|--------------------------|-------|-----------|-----|-------------|
| Family Resource Scales | | Items | Subscales | α | $r_{ m WB}$ |
| Family Resource Scale | Dunst & Leet (1985) | 30 | 6 | .92 | .57 |
| Resource Scale for Teenage Mothers | Dunst et al. (1986a) | 31 | 4 | NR | .45 |
| Family Resource Scale | Leet & Dunst (1988) | 31 | NR | .92 | .57 |
| Family Resource Scale | Taylor et al. (1993) | 29 | 3 | .93 | .43 |
| Modified Family Resource Scale | Crowley (1995) | 30 | 6 | .94 | .41 |
| Family Resource Scale-Modified | Taylor (1999) | 28 | 3 | .92 | .43 |
| Family Resource Scale-Revised | Van Horn et al. (2001) | 20 | 4 | .77 | NR |
| Arabic Family Resource Scale | Almasri et al. (2014) | 30 | 6 | .86 | NR |
| Family Resource Scale | Palermo et al. (2017) | 17 | 3 | .87 | .19 |
| Material Resources Scale | Ompad et al. (2018) | 18 | 3 | .91 | .58 |
| Family Resource Scale-Modified | Patwardhan et al. (2019) | 29 | 4 | .84 | .24 |

NR = Not reported.

 $r_{\rm WB}$ = Correlation coefficient for the relationship between the total FRS scale scores and study respondent wellbeing.

The FRS was developed to measure the adequacy of resources in households with young children with identified disabilities, developmental delays, medical conditions, and those at-risk for poor developmental outcomes associated with different family-related conditions (e.g., impoverished households; abuse or neglect). The scale has also been used to assess family resources in households experiencing different child and family stressful life events and how family resources buffer

 $[\]alpha$ = Coefficient alpha for the total scale scores.

families and family members from the negative effects of those life events and is a factor associated with enhanced family and family member well-being.

Purpose of the Study

The study described in this paper was a meta-analysis of the relationships between the adequacy of family resources and different dimensions of personal, family, and child well-being. Searches for research syntheses of FRS studies found no meta-analyses or systematic reviews of the relationships between broadly defined measures of family resources and different dimensions of well-being and psychological health and behavior.

The meta-analysis is part of a line of research by the author and his colleagues investigating how variations in different family systems model constructs are related to parent, family, and child functioning (Dunst, 2017). The model components include needs identification and fulfillment, resource and support mobilization, family strengths activation, and family-centered practices. The meta-analysis of family resources studies is part of this integrated line of research investigating how each of the model components is related to different dimensions of family and family member behavior and functioning.

Adequacy of family resources was operationalized in terms of the total scale scores on any of the FRS measures in Table 1. The main aim of the meta-analysis was to discern the nature of the relationships between family resources and different dimensions of psychological well-being in families of young children and adolescents. The adequacy of family resources was hypothesized to be related to enhanced positive well-being and attenuated negative well-being. The six main objectives of the study were:

Objective 1. Determine if the relationships between family resources and well-being are the same as those found in meta-analyses of studies of individual psychological resources.

Objective 2. Compare the strengths of the relationships between family resources and different dimensions of personal well-being.

Objective 3. Compare the strengths of the relationships between family resources and different dimensions of family well-being.

Objective 4. Compare the strengths of the relationships between family resources and personal, family, and child well-being.

Objective 5. Determine if the strength of the relationships between family resources and well-being differ as a function of child conditions or family-related life events or conditions.

Objective 6. Evaluate whether the number of family resource scale items moderate the relationship between adequacy of family resources and well-being.

METHODOLOGY

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 analyses related to each meta-analysis objective, and report the results for the different sets of analyses. The study protocol is included in the supplemental report for the meta-analysis (Dunst, 2021b).

Search Strategy

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 each of the scales in Table 1). Additional search terms were used as studies were located and related terms were used to describe the FRS or family resources were identified. For example, some investigators who used one of the scales in Table 1 to measure family resources referred to family resources as family needs, family supports, or family strengths (e.g., Littlewood, 2008; Raikes & Thompson, 2005).

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) the total scale score of one of the versions of the FRS in Table 1 was used to measure the adequacy of family resources, (b) one or more well-being measures was used as a dependent variable, (c) the study participants were parents or other primary caregivers of children at-risk for poor outcomes due to child or family factors, (d) the parents or primary caregivers completed both the family resource scales and well-being scales, and (e) the correlations between family resources and well-being were used as the metric for assessing the relationship between study measures. Well-being was broadly defined as any dimension of psychological health, functioning, or behavior where the total scale score for the well-being measures was used as the study outcomes. 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 well-being were not reported, (b) incomplete correlations between measures were reported, (c) correlations were reported 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--well-being measure relationship was the correlation coefficient and sample size in each study. The Appendix includes the data that were the focus of analysis in the research synthesis.

The dependent measures were categorized as personal, family, or child well-being measures based on the attributional targets of the well-being scale items (Bugental et al., 1998). The personal well-being measures were further categorized as general psychological health, depression, psychological stress, life satisfaction, or parenting stress. The family well-being measures were categorized as family stress, family functioning, or family quality of life. The child well-being measures all measured child behavioral functioning.

The direction of the correlation coefficients for the relationships between family resources and well-being could be either positive or negative depending on the well-being measures. For example, family resources would be expected to be positively related to well-being measures where higher well-being scores indicate better functioning and negatively related to well-being measures where higher scores indicate poorer functioning. The signs of the latter were reversed so that the effect sizes (correlation coefficients) for the relationships between higher family resource scales indicated better well-being. 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 type of well-being 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 well-being.

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 well-being measure. Non-significant 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 of different the well-being measures were used to estimate the strength and the relationships between measures. Separate analyses were performed for each type of personal, family, and child well-being.

The output for each analysis included the number of study samples 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 different well-being 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 Z-test.

Between Type of Well-Being Comparisons

 $Q_{\text{Between}}(Q_{\text{B}})$ was used to determine if the sizes of effects for the relationship between adequacy of family resources and different dimensions of well-being were the same or different. Q_{B} is analogous to a one-way between-group ANOVA for effect size data (Hedges, 1994). Between-group comparisons were done for the different personal well-being measures and the different family well-being measures. A between type of well-being comparison was also done for determining if sizes of effects for the relationships between family resources and personal, family, and child well-being measures were similar or different.

Moderator Analyses

Q_B was used to assess whether the strength of the relationship between family resources and well-being varied as a function of child and family life events or conditions. The risk conditions included children with identified disabilities or developmental delays (e.g., Autism; Speech and Language Delays), children with medical conditions (e.g., Neural Tube Defects; Myelomeningocele), children raised in low SES households (e.g., children in Early Head Start Programs), children at-risk for abuse or neglect (e.g., families in protective services programs), and children being raised by grandparents. Weighted linear regression analysis was used to determine if the number of FRS items used to compute a total scale score moderated the relationship between the adequacy of family resources and well-being.

SEARCH RESULTS

Study Selection

Figure 1 shows the flow chart for locating, screening, and identifying studies that met the inclusion criteria. All of the papers identified in the primary and secondary sources except Goggle Scholar were examined for relevance after duplicates were removed. The first 200 Google Scholar results were all screened; thereafter each page of results was screened until 10 pages in a row included no relevant papers.

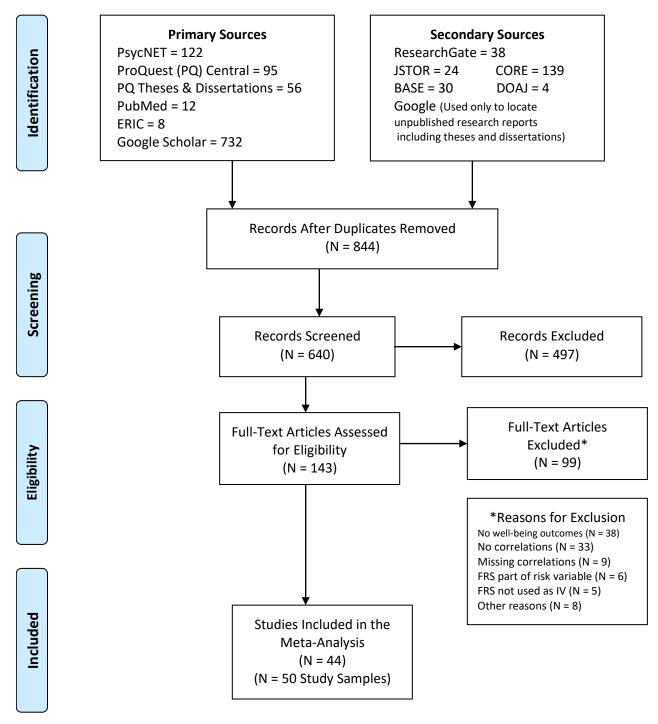


Figure 1. Flow chart for the identification of studies reporting the correlations between the adequacy of family resources and different dimensions of personal, family, and child well-being. (Adapted from Moher et al., 2009).

The large number of papers excluded during initial screening were either not research studies or were comparative research studies that did not include the correlations between family resources and well-being. The 99 full-text papers deemed non-eligibility were excluded for the reasons listed in Figure 1. Forty-four research reports met the inclusion criteria and included 50 independent samples of study participants. The 50 samples were considered the number of studies for purposes of conducting the meta-analysis.

Study and Participant Characteristics

Selected characteristics of the family resource studies, study participants, and the study participants' children are shown in Table 2. The individual study and study participant characteristics are included in the supplemental report for the meta-analysis (Dunst, 2021b).

Table 2: Selected Characteristics of the Family Resource Scale Studies and Study Participants^a

| | Number of | Percent of | | |
|--------------------------------|-----------|------------|--|--|
| udy Characteristics | Studies | Studies | | |
| Year of Research Report | 2000 | | | |
| 1986-1999 | 7 | 14 | | |
| 2000-2009 | 24 | 48 | | |
| 2010-2019 | 18 | 36 | | |
| Not Reported | 1 | 2 | | |
| Sample Size | 1 | 2 | | |
| 21-49 | 14 | 28 | | |
| 50-75 | 12 | 24 | | |
| 76-100 | 4 | 8 | | |
| 101-150 | 7 | 14 | | |
| 151-200 | 4 | 8 | | |
| 201-400 | 2 | 4 | | |
| | 7 | | | |
| 401-990 | / | 14 | | |
| Location of Studies | 42 | 0.0 | | |
| United States | 43 | 86 | | |
| India | 2 | 4 | | |
| Canada | 2 | 4 | | |
| South Africa | 1 | 2 | | |
| Brazil | 1 | 2 | | |
| Portugal | 1 | 2 | | |
| Type of Research Reports | | | | |
| Peer Reviewed Journal Articles | 26 | 52 | | |
| Theses or Dissertations | 18 | 36 | | |
| Unpublished Research Reports | 4 | 8 | | |
| Conference Proceedings | 2 | 4 | | |
| ticipant Characteristics | | | | |
| Gender | | | | |
| Primarily Mothers ^b | 36 | 72 | | |
| Grandmothers ^c | 7 | 14 | | |
| Fathers | 4 | 8 | | |
| Mixed Samples ^d | 3 | 6 | | |
| Percent Married | | | | |
| <25 | 8 | 16 | | |
| 25-39 | 3 | 6 | | |
| 40-54 | 3 | 6 | | |
| 55-69 | 6 | 12 | | |
| 70-84 | 9 | 18 | | |
| 85-100 | 10 | 20 | | |
| Not Reported | 11 | 22 | | |
| Mean Age (Years) | 11 | 22 | | |
| 17-19 | 3 | 6 | | |
| 20-29 | 8 | 16 | | |
| 30-39 | 18 | 36 | | |
| 40-49 | 7 | 14 | | |
| | 7 | | | |
| 50-62 | | 14 | | |
| Not Reported | 7 | 14 | | |
| Mean Years of School Completed | 0 | 4.5 | | |
| 9-10 | 8 | 16 | | |
| 11-12 | 12 | 24 | | |
| 13-14 | 13 | 26 | | |
| 15-17 | 7 | 14 | | |
| Not Reported | 10 | 20 | | |

Table 2, continued.

| | Number of | Percent of |
|--|-----------|------------|
| Child Characteristics | Studies | Studies |
| Mean Age (Years) | | |
| 0-3 | 15 | 30 |
| 4-6 | 5 | 10 |
| 7-9 | 18 | 36 |
| 10-12 | 6 | 12 |
| 13-16 | 4 | 8 |
| Not Reported | 2 | 4 |
| Child/Family Life Events or Conditions | | |
| Children with Identified Disabilities | 17 | 34 |
| Children with Medical Conditions | 13 | 26 |
| Children in Low SES Households | 9 | 18 |
| Children Raised by Grandparents | 6 | 12 |
| Children At-Risk for Abuse or Neglect | 5 | 10 |

^aSee Dunst (2021b) for the characteristics in each of the individual studies and samples.

Sixty percent of the studies included 100 or fewer study participants in contrast to 18% of the studies which included more than 200 study participants. Most studies were conducted in the United States. Seven studies were conducted in five other countries. Half of the studies were published in peer-reviewed journal articles and the other half were located in five different types of unpublished research reports.

Mothers of the children with identified or at-risk conditions were the study participants in the majority of the studies. The study samples were almost equally divided between those married or living with a partner and those in households without a partner. The participants were, on average, 30 to 39 years of age (Range = 17 to 62) and completed, on average, 12-13 years of formal schooling (Range = 9 to 17).

Most of the children were either preschoolers or early elementary school age. Sixty percent of the children had either identified disabilities or medical conditions associated with poor outcomes, whereas 40% of the children were at-risk for family-related factors (e.g., Low SES, child neglect).

Study Measures

Family Resources Measures

Four different versions of the FRS were used for assessing the adequacy of family resources (Dunst & Leet, 1985; Leet & Dunst, 1988; Taylor, 1999; Van Horn et al., 2001). The number of scale items used by primary study investigators ranged between 17 and 31 (See the Appendix).

Well-Being Measures

Table 3 shows the scales used to measure different dimensions of personal, family, and child well-being. The total well-being scale scores were the dependent measures in all but two primary studies. In two studies, the *Questionnaire on Resources and Stress-Short Form* (Friedrich et al., 1983) and the *General Health Survey-Short Form* (Ware et al., 1996) depression subscale scores were used to measure this well-being dimension.

^bSeventy-five percent or more of the participants were biological, adoptive, foster, or stepmothers of the children in the studies.

^cIncludes great grandmothers and step grandmothers.

^dIncludes both the children's mothers and other relatives or family members (e.g., fathers, grandparents).

The general health functioning measures each assessed different dimensions of well-being (depression, stress, anxiety, etc.). Each of the other personal well-being domain measures assessed primarily one type of well-being where the preponderance of scale item targets of appraisal was used to categorize the measures.

The three types of family well-being measures differed in terms of the judgments participants were asked to make about their families. The family stress measures all included judgments of the number of family life events that were considered stressful or problematic. The family functioning well-being measures all included items measuring different types of family member interactions (e.g., communication, commitment, cohesion). The family quality of life well-being measures all assessed positive aspects of family functioning.

Table 3: Personal, Family and Child Well-Being Measures in the Family Resource Scale Studies

| W N D + M | G. | # of |
|--|----------------------------------|---------|
| Well-Being Measures | Sources | Studies |
| Personal Well-Being M | easures | |
| General Psychological Health | 7 1371 (1000) | |
| Brief Symptom Inventory | Derogatis and Melisaratos (1983) | 6 |
| General Health Survey | Ware et al. (1993, 1996) | 2 |
| Health and Well-Being Index | Dunst (1986) | 2 |
| Depression Anxiety Stress Scale | Lovibond and Lovibond (1995) | 1 |
| Symptom Checklist | Derogatis (1992) | 1 |
| Questionnaire on Resources and Stress (QRS) | Holryod (1974, 1987) | 1 |
| Depression | | |
| Center for Epidemiological Studies-Depression Scale | Radloff (1977) | 7 |
| Beck Depression Inventory | Beck et al. (1961) | 4 |
| QRS-Short Form Depression Subscale | Friedrich et al. (1983) | 1 |
| General Health Survey Depression Subscale | Ware et al. (1996) | 1 |
| Psychological Stress | | |
| Perceived Stress Scale | Cohen et al. (1983) | 1 |
| Perceived Stress Index | Johnson (2016) | 1 |
| Beck Anxiety Inventory | Beck et al. (1988) | 1 |
| Life Satisfaction | | |
| Life Orientation Test | Scheier and Carver (1985) | 1 |
| World Health Organization Quality of Life Scale | World Health Organization (1996) | 1 |
| Satisfaction with Life Scale | Diener et al. (1985) | 1 |
| Psychological Well-Being Index | Bradburn and Caplovitz (1965) | 1 |
| Parenting Stress | 1 , | |
| Parenting Stress Index | Abidin (1997) | 19 |
| Stress Index for Parents of Adolescents | Sheras et al. (1988) | 1 |
| Family Well-Being Me | | |
| Family Stress | | |
| Life Events Inventory | Sarason et al. (1978) | 2 |
| Life Events Questionnaire | Persha and Rao (2002) | 2 |
| Family Inventory of Life Events and Changes | McCubbin and Patterson (1991) | 2 |
| Stressful Life Events Scale | Chang and Fine (2007) | 1 |
| Life Events Checklist | Kilmer et al. (1998) | 1 |
| Family Functioning | Kinner et al. (1990) | 1 |
| Family Assessment Device | Miller et al. (1985) | 2 |
| Family Environment Scale | Moos and Moos (1994) | 1 |
| Conflict Tactics Scale | Straus et al. (1996) | 1 |
| | | 1 |
| Dyadic Adjustment Scale Family Quality of Life | Spanier (1976) | |
| Family Quanty of Life Family Functioning Style Scale | Deal at al. (2000) | 4 |
| | Deal et al. (2009) | 4 |
| Beach Center Quality of Life Scale | Hoffman et al. (2006) | 1 |
| Child Ferrationing Mea | ISUFES | |
| Child Functioning | A -11 - (1000) | 4 |
| Child Behavior Checklist | Achenbach (1999) | 4 |
| Behavior and Emotional Rating Scale | Epstein (2004) | 2 |

Effect Size Data

The Appendix includes the data conducting the analyses of the relationships between the adequacy of family resources and the seven dimensions of well-being for each study including the independent and dependent measures. This 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 well-being, the size of effect (correlation coefficient) between family resources and the well-being measures, and the 95% confidence interval for the size of effect.

SYNTHESIS RESULTS

Publication Bias

The results from the publication bias analyses for each of the nine dimensions of well-being are shown in Table 4. The observed and adjusted average sizes of effect and 95% confidence intervals for each well-being dimension are identical or nearly identical. Both the Egger regression and Begg-Mazumber rank-order test results indicated no publication bias.

Table 4: Results of the Publication Bias Analyses

| | Observed Average z | | | Adjusted Average z | | Egger Regression Test | | Iazumber Order Test |
|----------------------|-----------------------|----------|-----|-----------------------|--------|--------------------------|--------|------------------------|
| Outcome Measures | z | 95% CI | z | 95% CI | t-test | <i>p</i> -value | Z-test | <i>p</i> -value |
| Personal Well-Being | | | | | | | | |
| General Health | .41 | .36, .47 | .41 | .36, .47 | 0.77 | .460 | 0.37 | .714 |
| Depression | .35 | .31, .39 | .34 | .30, .38 | 1.56 | .150 | 1.75 | .080 |
| Psychological Stress | .49 | .18, .80 | .49 | .18, .80 | 1.52 | .370 | 0.52 | .602 |
| Life Satisfaction | .45 | .25, .65 | .41 | .24, .58 | 1.92 | .190 | 1.36 | .174 |
| Parenting Stress | .43 | .40, .46 | .43 | .40, .46 | 1.61 | .130 | 1.22 | .221 |
| Family Well-Being | | | | | | | | |
| Family Stress | .35 | .30, .39 | .34 | .30, .39 | 0.62 | .550 | 0.89 | .371 |
| Family Functioning | .36 | .15, .57 | .36 | .15, .57 | 2.64 | .080 | 1.22 | .221 |
| Family QoL | .50 | .34, .66 | .50 | .34, .66 | 1.28 | .290 | 1.47 | .142 |
| Child Well-Being | | | | | | | | |
| Child Functioning | .35 | .24, .46 | .33 | .23, .43 | 1.21 | .290 | 0.75 | .452 |

NOTES: z = F isher's transformation of the correlation coefficients. QoL = Quality of Life.

Relationships Between Family Resources and Well-Being

Table 5 shows the average weighted effect sizes for the relationships between the adequacy of family resources measures and personal, family, and child well-being. The sizes of effects for each of the nine well-being measures were all statistically significant as evidenced by the *Z*-test results. The effect sizes ranged between .35 (family stress and child functioning) and .47 (life satisfaction). These results indicate that all of the different dimensions of well-being covary with the adequacy of family resources where higher FRS scores are associated with better psychological functioning.

The between type of well-being measure (personal vs. family vs. child) comparison indicated that the relationships between the adequacy of family resources and well-being were much the same, $Q_B = 2.56$, df = 2,77, p = .278. This result indicates that family resources have similar influences on each of the three types of well-being.

The different sets of analyses of the relationships between the adequacy of family resources and the within and between types of well-being measures indicate that family resources are related to enhanced The sizes of effects for the five personal well-being measures were similar as evidenced by a nonsignificant between the type of personal well-being domain comparison, $Q_B = 2.65$, df = 4.49, p = .618. This result indicates that the adequacy of family resources has similar effects

Table 5: Average Weighted Effect Sizes for the Relationships Between Adequacy of Family Resources and Personal, Family and Child Well-Being

| Well-Being Measures | k | N | r | 95% CI | Z-Test | <i>p</i> -value |
|------------------------------|----|------|-----|----------|--------|-----------------|
| Personal Well-Being | 54 | 8900 | .41 | .37, .44 | 21.81 | .000 |
| General Psychological Health | 13 | 1429 | .41 | .33, .48 | 9.96 | .000 |
| Depression | 14 | 2837 | .37 | .30, .44 | 10.00 | .000 |
| Psychological Stress | 3 | 204 | .45 | .26, .61 | 9.39 | .000 |
| Life Satisfaction | 4 | 260 | .47 | .15, .72 | 4.43 | .000 |
| Parenting Stress | 20 | 4170 | .42 | .37, .47 | 15.66 | .000 |
| Family Well-Being | 20 | 3000 | .37 | .31, .42 | 12.88 | .000 |
| Family Stress | 10 | 2495 | .35 | .26, .43 | 8.43 | .000 |
| Family Functioning | 5 | 190 | .35 | .19, .48 | 5.94 | .000 |
| Family Quality of Life | 5 | 315 | .46 | .38, .53 | 14.97 | .000 |
| Child Well-Being | 6 | 566 | .35 | .22, .46 | 6.89 | .000 |
| Child Behavior Functioning | 6 | 566 | .35 | .22, .46 | 6.89 | .000 |

NOTES. k = Number of studies, N = Number of study participants, <math>r = Average, weighted effect size, and CI = Confidence interval.

regardless of the type of personal well-being. The sizes of effects for the three family well-being measures were also similar as determined by a nonsignificant between the type of family well-being comparison, $Q_{\rm B} = 3.83$, df = 2.17, p = .147. This finding shows that the three types of family well-being covary with the adequacy of family resources in similar ways. psychological functioning (e.g., life satisfaction) and attenuated negative psychological functioning (e.g., personal stress, family stress). These findings illustrate the generalized importance of family resources as a family-related factor explaining variations in personal, family, and child well-being.

Moderator Analyses

The average weighted effect sizes for the relationships between adequacy of family resources and well-being for five different groups of children are shown in Table 6. The sizes of effect for each group of children differed significantly from zero as evidenced by the Z-test results. There was, however, a significant between-group difference in the sizes of effect, $Q_B = 15.51$, df = 4.75, p = .004. The size of effect for the children in low SES households is smaller than the sizes of effect for the other four groups of children. This was confirmed by a between-group comparison without the children in low SES households in the analysis where there was not a statistically significant difference between groups, $Q_B = 2.53$, df = 3.57, p = .471.

Table 6: Average Weighted Effect Sizes for the Relationships Between the Adequacy of Family Resources and Well-Being for Different Groups of Children

| Child Conditions | k | N | r | 95% CI | Z-Test | <i>p</i> -value |
|---|----|------|-----|----------|--------|-----------------|
| Children with Identified Disabilities or Delays | 30 | 5502 | .43 | .39, .47 | 19.31 | .000 |
| Children At-Risk for Abuse or Neglect | 5 | 1159 | .42 | .27, .55 | 7.26 | .000 |
| Children with Medical Conditions | 18 | 1362 | .41 | .36, .45 | 17.31 | .000 |
| Children Raised by Grandparents | 8 | 1305 | .37 | .27, .46 | 8.17 | .000 |
| Children in Low SES/Impoverished Homes | 19 | 3138 | .31 | .25, .36 | 10.61 | .000 |

The analysis regressing the effect sizes (correlation coefficients) between the adequacy of family resources and well-being on the number of family FRS items was not significant, $Q_B = 0.73$, df = 1,78, p = .393. This result indicates that the number of FRS items that were used to compute a total scale score did not influence the strength of the relationships between adequacy of family resources and well-being.

DISCUSSION

Main Findings

Results showed that the adequacy of family resources was related to each of the different dimensions of well-being that was the focus of investigation (Objective 1). The more adequate were family resources, the better was the study participants' personal well-being and their family and children's well-being. The results are similar to those found in research syntheses of the relationships between individual psychological resources and personal well-being (Deci & Ryan, 2000; Hobfoll, 2002; Tay & Diener, 2011; Yu et al., 2018). Findings from the meta-analysis add to this knowledge base by showing how family resources are related to parent, family, and child well-being in addition to personal well-being.

The strength of the relationships between family resources and the five different dimensions of personal well-being was much the same as evidenced by a nonsignificant between type of well-being comparison (Objective 2). The same was the case for the relationships between family resources and the three different dimensions of family well-being. The between type of family well-being comparison was nonsignificant indicating that the strength of the relationships between family resources and family stress, family functioning, and family quality was much the same (Objective 3).

The between type of well-being comparison (personal vs. family vs. child) showed that the strength of the relationships between adequacy of family resources and the different types of well-being were much the same (Objective 4). This finding, together with the results for Objectives 1, 2, and 3, indicates that family resources have both enhanced positive and attenuated negative effects on different dimensions of personal, family, and child well-being. The findings are similar to those reported in research syntheses of the relationships between other family systems constructs (e.g., family strengths, family hardiness, family relationships, family cohesion) and personal, family, and child well-being (Klugg & Maier, 2015; Leeman et al., 2016; Olson et al., 1980, 2019; Scabini, 20016; Van Schoors et al., 2017).

The analyses of the relationships between the adequacy of family resources and well-being for different groups of children showed that regardless of child or family risk condition, resources were significantly related to well-being (Objective 5). The size of effect for the relationship between family resources and well-being, however, was smaller for children in low SES households compared to that for the other groups of children (Table 6). This is most likely the case because these families have fewer resources compared to middle- and upper-SES families (Brooks-Gunn, 1995). As noted by Shonkoff and Phillips (2000) "The psychological well-being of mothers...[is] likely to suffer in families with limited resources" (p. 268). The same is also true for family and child well-being as the results reported in this paper indicate.

Contrary to expectation, the number of FRS items used to compute a total scale score did not moderate the relationships between the adequacy of family resources and well-being (Objective 6). This most likely is the case since all four scales used to measure the adequacy of family resources included items tapping different types of resources rather than any one particular resource (e.g., only financial resources). Brannan et al. (2006) noted, for example, that eliminating redundant items for measuring the same type of family resource may not affect the predictive value of the adequacy of family resources measure. Results reported in this paper support this assertion.

Family Systems Theories and Family Resources

Family systems theories and models (e.g., Broderick, 1993; Johnson & Ray, 2016) include the proposition that family process variables account for variations in family and family member health, well-being, and functioning (see e.g., Walsh, 1994). Different theorists emphasize the importance of different process variables for explaining healthy family functioning.

The family systems model that framed the conduct of the meta-analysis includes four components: Needs identification and fulfillment, family resources and supports, family strengths and hardiness, and family-centered practices (Dunst, 2017). Research syntheses of family strengths and hardiness studies (Dunst, 2021a, 2021c, in press-b; Dunst et al., 2021), social support studies (Dunst & Trivette 1990; Dunst et al., 1997), and family-centered practices studies (Dunst et al., 2007, 2008c) all yielded evidence showing that the different family systems model components or subcomponents are related to different dimensions of family and family member behavior and functioning, including well-being. Results from the meta-analysis in this paper add to this evidence by demonstrating how the adequacy of family resources is also related to personal, family, and child well-being. A companion meta-analysis includes results for the relationships between the adequacy of family resources and parenting beliefs and practices (Dunst, in press-c). The next step in this line of research is to investigate whether different types of family resources (e.g., basic resources, time availability, financial resources) are differentially related to family and family member behavior and functioning.

Strengths and Limitations

Several strengths of the meta-analysis include the large number of studies that met the inclusion criteria, the different types of research reports that were included in the research synthesis, the range of different dimensions of well-being that were the focus of investigation, and the generalizability of the results given the consistent pattern of results regardless of the number of FRS items and type of well-being measures. The latter is the case since the average effects size and confidence intervals for those effect sizes for all nine well-being measures indicated that the results would most likely be found in most families and households with children with different at-risk conditions.

Several limitations of the meta-analysis include the focus on only one measure of family resources and the use of correlation coefficients as the size of effects between family resources and wellbeing. The latter limits conclusions about the causal relationships between measures. Notwithstanding these limitations, the results are very similar to those found for the relationships between psychological resources and personal well-being.

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Appendix

Measures and Effect Size Data Used for the Meta-Analysis of the Relationships Between the Adequacy of Family Resources and Personal, Family and Child Well-Being

| | | FR | C a | | | 95% | CIc |
|--------------------------|-----|-------|------------|----------------------------------|----------------|----------|-----------|
| Study | N | Scale | # | Well-Being Measures ^b | _r – | LL | UL |
| General Health | 11 | Scarc | | Wen-being Weasures | | <u> </u> | <u>CL</u> |
| Bachanas et al. (2001) | 68 | DL | 30 | Brief Symptom Inventory | .35 | .12 | .55 |
| Brown et al. (2000) | 55 | DL | 30 | Symptom Checklist-90-R | .25 | 02 | .49 |
| Burrell et al. (1994) | 53 | LD | 31 | Ouest. Resources & Stress | .63 | .43 | .77 |
| Dunst et al. (1986b) | 21 | DL | 30 | Health & Well-Being Index | .45 | 01 | .75 |
| Dunst & Leet (1987) | 45 | DL | 30 | Health & Well-Being Index | .56 | .31 | .74 |
| Hill (2010) | 57 | LD | 31 | General Health Survey-SF12 | .47 | .23 | .65 |
| Kelley et al. (2000) | 102 | LD | 31 | Brief Symptom Inventory | .46 | .29 | .60 |
| Kelley et al. (2011) | 230 | LD | 31 | Brief Symptom Inventory | .45 | .34 | .55 |
| Kelley et al. (2013) | 480 | LD | 31 | Brief Symptom Inventory | .31 | .23 | .39 |
| Lindsey & Barry (2011) | 157 | DL | 30 | Dep. Anxiety Stress Scale | .51 | .38 | .62 |
| Persha & Rao (2003) 1 | 51 | VH | 22 | Brief Symptom Inventory | .37 | .10 | .59 |
| Persha & Rao (2003) 2 | 54 | VH | 22 | Brief Symptom Inventory | .31 | .04 | .54 |
| Salzer (2005) | 56 | LD | 31 | General Health Survey-SF36 | .11 | 16 | .37 |
| Depression | | | | 2 | | | |
| Budescu et al. (2018) | 115 | VH | 18 | CES-Depression Scale | .27 | .09 | .43 |
| Candelaria et al. (2006) | 103 | | | Beck Depression Scale | .37 | .19 | .53 |
| Chang & Fine (2007) | 580 | DL | 30 | CES-Depression Scale | .16 | .08 | .24 |
| Cheesman (2011) | 30 | DL | 30 | CES-Depression Scale | .69 | .43 | .85 |
| Eshbaugh et al. (2006) | 523 | DL | 30 | CES-Depression Scale | .32 | .24 | .40 |
| Espeleta et al. (2019) | 333 | DL | 30 | CES-Depression Scale | .35 | .25 | .44 |
| Herman & Marcenko | 150 | DL | 18 | QRS-SF Depression Subscale | .41 | .27 | .54 |
| Littlewood (2008) | 175 | DL | 30 | GHQ Depression Subscale | .32 | .18 | .45 |
| Loutzenhiser (2001) 1 | 23 | LD | 31 | Beck Depression Inventory | .50 | .09 | .77 |
| Loutzenhiser (2001) 2 | 23 | LD | 31 | Beck Depression Inventory | .50 | .09 | .77 |
| Ridings et al. (2018) | 562 | DL | 30 | Beck Depression Inventory | .46 | .39 | .52 |
| Salzer (2005) | 56 | LD | 31 | CES-Depression Scale | .36 | .10 | .57 |
| Whittaker et al. (2011) | 114 | DL | 30 | CES-Depression Scale | .34 | .16 | .49 |
| Williams et al. (2019) | 50 | VH | 22 | Beck Depression Inventory | .55 | .31 | .72 |
| Psychological Stress | | | | - | | | |
| Gatling (2005) | 118 | DL | 30 | Perceived Stress Scale | .50 | .35 | .63 |
| Johnson (2016) | 36 | VH | 20 | Perceived Stress Inventory | .42 | .09 | .66 |
| Williams et. el. (2019) | 50 | VH | 22 | Beck Anxiety Inventory | .36 | .08 | .58 |
| Life Satisfaction | | | | | | | |
| Budescu et al. (2018) | 115 | VH | 18 | Life Orientation Test | .26 | .08 | .42 |
| Cheesman (2011) | 30 | DL | 30 | WHO Quality of Life Scale | .66 | .38 | .83 |
| Coleman-Reed (2016) | 94 | VH | 17 | Satisfaction with Life Scale | .48 | .30 | .62 |
| Dunst et al. (1986b) | 21 | DL | 30 | Psych. Well-Being Index | .61 | .21 | .83 |

| A | p | рe | ene | dix | , c | on | tin | u | ed | |
|---|---|----|-----|-----|-----|----|-----|---|----|--|
| | | | | | | | | | | |

| Appendix, continued | | FR | S | | | 95% CI | |
|----------------------------|-----|-------|----|------------------------------|-----|--------|-----|
| Study | N | Scale | # | Well-Being Measures | r | LL | UL |
| Parenting Stress | | | | | | | |
| Armans (2018) | 46 | DL | 30 | Parenting Stress Index | .29 | 01 | .54 |
| Chang & Fine (2007) | 580 | DL | 30 | Parenting Stress Index | .30 | .22 | .37 |
| Cheesman (2011) | 30 | DL | 30 | Parenting Stress Index | .64 | .35 | .82 |
| Ericson (1998) | 94 | LD | 31 | Parenting Stress Index | .54 | .38 | .67 |
| Grunberg (2016) | 199 | VH | 21 | Parenting Stress Index | .40 | .28 | .51 |
| Levine (2010) | 26 | DL | 30 | Parenting Stress Index | .64 | .32 | .83 |
| Macias et al. (2007) 1 | 71 | DL | 30 | Parenting Stress Index | .50 | .30 | .66 |
| Macias et al. (2007) 2 | 71 | DL | 30 | Parenting Stress index | .33 | .10 | .53 |
| Persha & Rao (2003) 1 | 51 | VH | 22 | Parenting Stress Index | .56 | .32 | .73 |
| Persha & Rao (2003) 2 | 54 | VH | 22 | Parenting Stress Index | .15 | 13 | .41 |
| Pratt (1992) | 503 | LD | 31 | Parenting Stress Index | .42 | .35 | .49 |
| Smith et al. (2001) | 880 | DL | 30 | Parenting Stress Index | .38 | .32 | .44 |
| Spratt et al. (2007) 1 | 70 | DL | 30 | Parenting Stress Index | .54 | .35 | .69 |
| Spratt et al. (2007) 2 | 45 | DL | 30 | Parenting Stress Index | .37 | .08 | .60 |
| Spratt et al. (2007) 3 | 45 | DL | 30 | Parenting Stress index | .55 | .30 | .73 |
| Taylor (1999) | 990 | TY | 28 | Parenting Stress Index | .43 | .38 | .48 |
| Vohr et al. (n.d.) | 100 | DL | 30 | Parenting Stress Index | .59 | .44 | .71 |
| Whittaker et al. (2011) | 114 | DL | 30 | Parenting Stress Index | .36 | .19 | .51 |
| Williams et al. (2019) | 50 | VH | 22 | Parentng Stress Index | .47 | .21 | .67 |
| Wilson (2009) | 151 | LD | 24 | Stress Index for Parentng | .38 | .23 | .51 |
| Family Stress | | | | | | | |
| Bachanas et al. (2001) | 68 | DL | 30 | Daily Hassles Scale | .30 | .06 | .51 |
| Candelaria et al. (2006) | 103 | DL | 22 | Life Events Questionnaire | .39 | .21 | .54 |
| Chang & Fine (2007) | 580 | DL | 30 | Stressful Life Events Scale | .18 | .10 | .26 |
| Kilmer et al. (2010) | 100 | DL | 30 | Life Events Checklist | .38 | .20 | .54 |
| Loutzenhiser (2001) 1 | 23 | LD | 31 | Life Events Inventory | .57 | .18 | .80 |
| Loutzenhiser (2001) 2 | 23 | LD | 31 | Life Events Inventory | .57 | .18 | .80 |
| Persha & Rao (2003) 1 | 51 | VH | 22 | Life Events Questionnaire | .48 | .23 | .67 |
| Persha & Rao (2003) 2 | 54 | VH | 22 | Life Events Questionnaire | .16 | 12 | .42 |
| Pratt (1992) | 503 | LD | 31 | Fam. Inventory Life Events | .35 | .27 | .42 |
| Taylor (1999) | 990 | TY | 28 | Fam. Inventory Life Events | .39 | .34 | .44 |
| Family Functioning | | | | | | | |
| Dunst et al. (1986b) | 13 | DL | 30 | Family Environment Scale | 04 | 62 | .57 |
| Grunberg (2016) | 100 | VH | 21 | Dyadic Adjustment Scale | .41 | .23 | .56 |
| Loutzenhiser (2011) 1 | 23 | LD | 31 | Family Assessment Device | .29 | 16 | .64 |
| Loutzenhiser (2001) 2 | 23 | LD | 31 | Family Assessment Device | .38 | 06 | .70 |
| Ramos (2019) | 31 | DL | 30 | Conflict Tactics Scale | .25 | 13 | .57 |
| Family Quality of Life | | | | | | | |
| Ericson (1998) | 94 | LD | 31 | Family Function. Style Scale | .46 | .28 | .61 |
| Farber et al. (2002) | 73 | DL | 30 | Family Function. Style Scale | .38 | .16 | .56 |
| Ferreira (2014) | 43 | DL | 30 | Family Quality of Life Scale | .55 | .29 | .73 |
| Persha & Rao (2003) 1 | 51 | VH | 22 | Family Function. Style Scale | .46 | .20 | .66 |
| Persha & Rao (2003) 2 | 54 | VH | 22 | Family Function. Style Scale | .49 | .25 | .67 |
| Child Behavior & Health | | | | | | | |
| Cheesman (2011) | 30 | DL | 30 | Child Behavior Checklist | .59 | .28 | .79 |
| Kelley et al. (2011) | 230 | LD | 31 | Child Behavior Checklist | .26 | .13 | .38 |
| Kilmer et al. (2010) | 100 | DL | 30 | Beh. & Emot. Rating Scale | .36 | .17 | .52 |
| Korloff et al. (2001) | 110 | DL | 30 | Beh. & Emot. Rating Scale | .44 | .27 | .58 |
| Wohlfeiler et al. (2008) 1 | 48 | DL | 30 | Child Behavior Checklist | .25 | 04 | .50 |
| Wohlfeiler et al. (2008) 2 | 48 | DL | 30 | Child Behavior Checklist | .30 | .01 | .54 |

^a# = of scale items, DL = Dunst and Leet (1985), LD = Leet and Dunst (1988), VH = Van Horn et al. (2001), and

TY = Taylor (1999).

^bSee Table 3 for the sources of each of the well-being measures.

[°]CI = Confidence interval, LL = Lower limit effect size, and UL = Upper limit effect size.