

DIFFERENTIAL RELATIONSHIPS BETWEEN THE ADEQUACY OF DIFFERENT TYPES OF FAMILY RESOURCES AND PSYCHOLOGICAL HEALTH AND WELL-BEING: A META-ANALYSIS

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ABSTRACT: *This paper includes analyses of the relationships between the adequacy of three different types of family resources (basic resources, financial resources, time availability) and the psychological health and well-being of parents and other primary caregivers of children and adolescents birth to 18 years of age at-risk for poor outcomes. Meta-analysis was used to determine (a) the effect sizes between each type of family resource and psychological health and well-being, (b) the relative importance of each type of resource in explaining variations in psychological functioning, and (c) if the number of items used to measure each type of family resource moderated the relationships between family resources and psychological functioning. The study included 14 studies (N = 2,980 study participants) conducted in the United States between 1986 and 2018. Nine different scales were used to measure the study participants' psychological health and well-being. All three types of family resources were significantly related to the study participants' psychological functioning. The size of effect between time availability and health and well-being was larger than the sizes of effect between basic and financial resources and psychological functioning. The larger the number of items used to measure financial resources, the poorer the study participants' health and well-being. In contrast, the larger the number of items used to measure time availability, the better was the study participants' psychological functioning. The overall pattern of results is consistent with both family stress theories and family systems theories in terms of the importance of family resources as a determinant of healthy psychological functioning. Additionally, the different sets of analysis provided converging evidence about the relative importance of time availability as a family resource for explaining variations in the study participants' psychological health and well-being.*

KEYWORDS: Family resources, basic resources, financial resources, time availability, psychological health, well-being, meta-analysis

INTRODUCTION

Family stress theories (e.g., McCubbin & Patterson, 1983; Olson & Stewart, 1991) and family systems theories (e.g., Emery, 2014; B. E. Johnson & Ray, 2016) both include tenets that the adequacy of family resources is one family-related factor that explains variations in psychological health and well-

being. Family resources include “the psychological, social, interpersonal, and material characteristics of individual family members [and] the family unit...that meets family demands and needs” (Lim & Zebrack, 2004, p.7). According to Walsh (1994), family systems 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” (p. 175).

Different researches tend to emphasize the importance of different types of family resources as a factor accounting for variations in psychological health and well-being (e.g., Fink, 1995; Rettig & Bubolz, 1983; Scabini, 2016). Family resources have been examined in terms of family and family member social status (e.g., income, education, occupational prestige; Citro & Michael, 1995; McLoyd, 1998), family member relationships, attributes, and characteristics (e.g., cohesion, adaptability, coping, communication; Lavee et al., 1985; Umberson & Thomeer, 2020), and different types of human, material, financial, and other types of supports, strengths, and resources (e.g., good paying job, food and shelter, healthcare, time availability; Dunst & Leet, 1985, 1987; Rowland et al., 1985).

The relationship between the adequacy of financial resources and psychological health and well-being has been well-documented (e.g., Howell & Howell, 2008; Ngamaba et al., 2020). Results from meta-analyses indicate that economic security and perceived adequacy of financial resources were both related to study participants’ psychological health and well-being. These relationships are universal or nearly universal throughout the world (Diener & Oishi, 2000).

Searches for research syntheses of the relationships between the adequacy of basic family resources or the adequacy of time-related resources and psychological health and well-being found no meta-analyses or systematic reviews. Narrative reviews of the relationships between these types of family resources and health and well-being indicate the importance of fulfillment of basic needs and time availability as predictors of healthy psychological functioning. Tay and Diener (2011) found that fulfillment of basic needs was related to both life satisfaction and positive and negative affect. Findings from narrative reviews of parenting practices and well-being identified time availability as one factor related to parents’ well-being (Nomaguchi & Milkie, 2020). Whether these relationships, as well as the relationships with the adequacy of financial resources, could be replicated in a quantitative review of family resource studies was the focus of the research synthesis reported in this paper.

Family Resources and Health and Well-Being

The meta-analysis described in this brief report focused on the relationships between the adequacy of three types of family resources (financial resources, basic resources, and time availability) and the psychological health and well-being of parents and other primary caregivers of children birth to 18-years-of-age. The research synthesis is part of a larger meta-analysis of the relationship between the adequacy of family resources and different dimensions of personal, parenting, family, and child behavior and functioning (Dunst, 2021, in press-a, in press-b). Studies that included the *Family Resource Scale* (FRS; Dunst & Leet, 1985, 1987) for measuring the adequacy of family resources in

households of children and adolescents at-risk for poor outcomes were eligible for inclusion in the meta-analyses.

Family Resource Scale

The original version of the FRS (Dunst & Leet, 1985, 1987) 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 children, family, and friends (partner, kin, friends, etc.), and expendable income (money for entertainment, travel, etc.). A person completing the scale rates each FRS item on a 5-point Likert scale ranging from *not-at-all adequate* to *almost always adequate*.

There are at least 10 versions of the FRS which differ in terms of the number of scale items for measuring the adequacy of family resources (Dunst, in press-b). The total number of scale items and the number of subscale items differ for conceptual, methodological, and procedural reasons. For example, Van Horn et al. (2001) used psychometric analysis to identify four internally consistent FRS subscales and to delete 10 items based on “theoretical and statistical grounds” (p. 60). In contrast, Palermo et al. (2017) selected 17 of the 30 FRS scale items that were used to measure the adequacy of financial resources to meet basic family needs.

One of the meta-analyses completed-to-date examined the relationships between the total FRS scale score (sum of the item ratings) and personal, family, and child well-being (Dunst, in press-b). The meta-analysis included 44 studies and 50 independent samples of study participants (N = 8,183). The personal well-being measures included general psychological health, depression, stress, life satisfaction, and parenting stress. The family well-being measures included family stress, family functioning, and family quality of life. All of the child well-being measures assessed positive and negative child behavior functioning.

Results from the meta-analysis showed that the total FRS scale scores for measuring the adequacy of family resources were significantly related to each of the nine psychological health and well-being measures. Higher FRS scale scores were related to enhanced positive health functioning and attenuated negative health functioning. The sizes of effects between the five personal well-being measures did not differ significantly which was also the case for the sizes of effects between the three family well-being measures. There was also no difference in the sizes of effect between the personal, family, and child well-being measures.

Purpose of the Study

This paper includes additional analyses of a subset of studies in the Dunst (2021, in press-b) meta-analysis. Fourteen of the 44 studies in the meta-analysis included the correlations between different FRS subscale scores and study participant psychological health and well-being. The subscales that were the focus of investigation were the adequacy of financial resources, the adequacy of basic resources, and the adequacy of time to engage in different personal and family activities. Table 1

shows the FRS scale items used to measure subscale scores in the 14 studies. Investigators used different numbers of subscale items to measure the adequacy of the three types of family resources for different reasons.

Table 1: Family Resource Scale Items Used to Measure the Adequacy of Three Different Types of Family Resources

Basic Resources	Financial Resources	Time Adequacy
Food for two meals a day	Money to buy necessities	Time to spend with spouse or partner
House or apartment	Money to pay monthly bills	Time to spend with friends
Heat for your house or apartment	Good paying job for self or partner	Someone to talk to
Indoor plumbing/water	Public assistance (if needed)	Time to socialize
Furniture for house or apartment	Money to save	Time to spend with family
Telephone or access to a phone	Medical and dental care	Time to spend with your child(ren)
Dependable transportation	Money for family entertainment	Babysitting or childcare
Clothing for family members	Money for travel or vacation	Time to get enough rest or sleep
Toys for your child(ren)	Money to spend on oneself	Time to stay in shape/take care of oneself

NOTE. Different investigators included a different number of subscale items for computing subscale scores.

The two main purposes of the meta-analysis were to determine if (a) the FRS subscale scores were related to study participants' psychological health and well-being and (b) the sizes of effects for the relationships between the three different types of family resources and the health and well-being outcome measures were the same or different. As noted by Van Horn et al. (2001), the use of...subscales, rather than a single unidimensional [total] scale score, allows researchers to determine which aspects of family resources contribute to differential outcomes" (p. 66). The secondary purpose of the meta-analysis was to determine if the number of items used to compute subscale scores moderated the relationships between the adequacy of the three different types of family resources and psychological health and well-being. Brannan et al. (2006), for example, noted that the number of FRS scale items used to measure different types of family resources might affect the predictive validity of the adequacy of family resource scale measures.

METHOD

Procedures 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. Detailed descriptions of the search terms and methods, the scales used to measure the adequacy of family resources, and the psychological health and well-being measures are included in Dunst (in press-b). The study protocol is included in the supplemental report for the meta-analysis (Dunst, 2021).

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 electronic databases used as search sources. The primary search terms included “family resource scale”, family resources scale”, “adequacy of family resources”, and “adequacy of resources” AND (the surnames of the first author of the 10 different versions of the FRS; Dunst, in press-b). Other search terms were used to identify family resources studies when it was determined that primary study investigators used other terms to describe family resources (e.g., family supports, family strengths).

Search Sources

Six primary (PsycNET, ProQuest Central, PubMed, ERIC, Google Scholar, ProQuest Theses and Dissertations) and five secondary (ResearchGate, Directory of Open Access Journals, JSTOR, BASE, CORE) electronic databases were searched for FRS studies. Google was searched for unpublished research reports not located in any of the primary or secondary sources.

Inclusion and Exclusion Criteria

Studies were included if one or more of the subscales in Table 1 were used to measure the adequacy of family resources and the correlations with psychological health and well-being measures were reported, the participants were parents or other primary caregivers of children birth to 18 years of age, and the study participants completed both the FRS and outcome measures. Research reports were excluded if they included no correlations between the study measures, incomplete correlations were reported, or the results were reported only as not significant.

Search Results

The search procedures identified 844 non-duplicated papers that referenced the FRS. The majority (N = 701, 83%) were excluded because the papers did not include research results or no correlations were reported between the FRS and any psychological health and well-being measures. The 143 full-text papers assessed for eligibility identified 14 research reports that met the inclusion criteria. One report included two independent samples of study participants (Brody & Flor, 1997). The number of study samples for conducting the meta-analysis, therefore, was 15.

Study Participants

Table 2 shows selected characteristics of the study participants. All of the studies were conducted in the United States between 1986 and 2018. The total number of study participants was 2,980. Twelve of the research reports were published in peer-reviewed journal articles. The other three research reports included a dissertation (V. A. Johnson, 2016), an honors thesis (Levine, 2010), and an ERIC report (M. J. Taylor, 1999).

Table 2: Selected Characteristics of the FRS Studies and Study Participants

Study Characteristics			Participant Characteristics				Child Characteristics	
Study	N	Source	Percent Mothers	M Age (years)	M Yrs. School	Percent Married ^a	M Age (years)	Age Range (years)
Brody & Flor (1997) Sample 1	71	Journal Article	100	28	11	0	8	5-12
Brody & Flor (1997) Sample 2	85	Journal Article	100	28	11	0	8	5-12
Brody et al. (2006)	172	Journal Article	100	38	12	23	11	---
Budescu et al. (2018)	115	Journal Article	NR	44	11	16	16	14-18
Dunst & Leet (1987)	45	Journal Article	100	29	13	NR	3	1-5
Dunst et al. (1986)	21	Journal Article	100	17	9	29	NA	NA
Herman & Marcenko (1997)	150	Journal Article	93	36	13	69	9	2-16
Johnson (2016)	36	Thesis ^b	84	30	NR	NR	NR	<1-18
Lee et al. (2017)	90	Journal Article	42	45	16	100	13	9-17
Levine (2010)	26	Honors Thesis	NR	NR	NR	NR	2.5	2-3
Munsell et al. (2016)	99	Journal Article	99	37	13	NR	10	4-17
Palermo et al. (2017)	714	Journal Article	100	24	10	52	2.5	2-3
Seaton & Taylor (2003)	164	Journal Article	100	37	10	21	15	12-18
Taylor (1999)	992	ERIC Report	100	30	13	79	2	<1-5
Taylor et al. (2014)	200	Journal Article	100	38	11	28	15	14-18

NOTES. NR = Not reported, NA = Not applicable (sample included pregnant adolescents), and ERIC = Education Resource Information Center.

^aIncludes participants living with a partner or cohabitating.

^bDoctoral dissertation.

Mothers were the primary study participants in all but one study (Lee et al., 2017). The participants' median average age was 30 years (Range = 17 to 45). The median years of formal education completed by the participants was 12 (Range = 9 to 16). In studies including marital status, most participants were neither married nor living with a partner. Seventy percent or more of the study participants were married or living with a partner in only two studies (Lee et al., 2017; Taylor, 1999).

The study participants' children had identified disabilities or medical conditions (N = 7 studies), were at-risk for poor outcomes due to family socioeconomic factors (N = 5), or were offspring of unmarried mothers or pregnant teenagers (N = 3). The children included infants and toddlers (N = 5 studies),

early elementary age children (N = 6), and adolescents (N = 4). The children ranged between birth and 18 years of age.

Data Preparation

Each research report was coded according to the study sample size, type of FRS subscale, number of subscale items, the scales used to measure psychological health and well-being, and the correlations between the subscale scores and the dependent measures. The data that were the focus of analysis are shown in Table 3 for each study in the meta-analysis.

Table 3: Family Resource Scales and Psychological Health and Well-Being Measures Used in the Meta-Analysis Studies

Study	N	FRS		Outcome Measures	Sources	Effect Sizes	
		Scale	Items			r	95% CI
Basic Resources							
Budescu et al. (2018)	115	VH	7	CES-Depression Scale	Radloff (1977)	.14	-.05, .32
Budescu et al. (2018)	115	VH	7	Life Orientation Test	Scheier & Carver (1985)	.14	-.05, .32
Dunst & Leet (1987)	45	DL	8	Health & Well-Being Index	Dunst (1986)	.22	-.09, .49
Dunst et al. (1986)	21	DL	10	Psychological Well-Being Index	Bradburn & Caplovitz (1965)	.45	-.01, .75
Johnson (2016)	36	VH	7	Perceived Stress Scale (ID)	Johnson (2016)	.41	.08, .66
Levine (2010)	26	DL	10	Parenting Stress Index	Abidin (2012)	.28	-.14, .62
Munsell et al. (2016)	99	DL	7	Brief Symptom Inventory	Derogatis (1993)	.51	.35, .64
Taylor (1999)	992	TY	9	Parenting Stress Index	Abidin (1997)	.29	.23, .35
Financial Resources							
Brody et al. (1997) Sample 1	71	DL	17	CES-Depression Scale	Radloff (1977)	.41	.19, .59
Brody et al. (1997) Sample 2	85	DL	17	CES-Depression Scale	Radloff (1977)	.30	.09, .48
Brody et al. (2006)	172	DL	10	CES-Depression Scale	Radloff (1977)	.37	.23, .49
Budescu et al. (2018)	115	VH	5	CES-Depression Scale	Radloff (1977)	.33	.15, .49
Budescu et al. (2018)	115	VH	5	Life Orientation Test	Scheier & Carver (1985)	.29	.11, .45
Dunst & Leet (1987)	45	DL	7	Health & Well-Being Index	Dunst (1986)	.38	.09, .61
Dunst et al. (1986)	21	DL	8	Psychological Well-Being Index	Bradburn & Caplovitz (1965)	.40	-.07, .72
Herman & Marcenko (1997)	150	DL	7	QRS-SF Depression Scale	Friedrich et al. (1983)	.39	.24, .52
Johnson (2016)	36	VH	5	Perceived Stress Scale (ID)	Johnson (2016)	.60	.33, .78
Levine (2010)	26	DL	8	Parenting Stress Scale	Abidin (1997)	.61	.27, .81
Palermo et al. (2017)	714	PA	17	CES-Depression Scale	Radloff (1977)	.14	.07, .21
Seaton & Taylor (2003)	164	DL	7	Life Orientation Test	Scheier & Carver (1985)	.24	.09, .38
Seaton & Taylor (2003)	164	DL	7	CES-Depression Scale	Radloff (1977)	.18	.03, .33
Taylor (1999)	992	TY	13	Parenting Stress Scale	Abidin (2012)	.34	.28, .39
Taylor et al. (2014)	200	DL	7	CES-Depression Scale	Radloff (1977)	.32	.19, .44
Taylor et al. (2014)	200	DL	7	Life Orientation Test	Scheier & Carver (1985)	.28	.15, .40

Table 3, continued

Study	N	FRS		Outcome Measures	Sources	Effect Sizes	
		Scale	Items			<i>r</i>	95% CI
Time Availability							
Budescu et al. (2018)	115	VH	6	CES-Depression Scale	Radloff (1977)	.34	.17, .49
Budescu et al. (2018)	115	VH	6	Life Orientation Test	Scheier & Carver (1985)	.35	.18, .50
Dunst & Leet (1987)	45	DL	9	Health & Well-Being Index	Dunst (1986)	.72	.53, .84
Dunst et al. (1986)	21	DL	10	Psychological Well-Being Index	Bradburn & Caplovitz (1965)	.68	.33, .87
Herman & Marcenko (1997)	150	DL	9	QRS-SF Depression Scale	Friedrich et al. (1983)	.63	.52, .72
Johnson (2016)	36	VH	8	Perceived Stress Scale (ID)	Johnson (2016)	.33	-.01, .60
Lee et al. (2017)	90	VH	6	PANAS	Watson et al. (1988)	.25	.04, .44
Levine (2010)	26	DL	8	Parenting Stress Index	Abidin (1997)	.67	.36, .85
Taylor (1999)	992	TY	9	Parenting Stress Index	Abidin (1997)	.47	.42, .52

NOTES. FRS = Family Resource Scale, DL = Dunst and Leet (1985, 1987), Palermo et al. (2017), TY = Taylor (1999), VH = Van Horn et al. (2001), Items = Number of items used to compute the subscale scores, CES = Center for Epidemiological Studies, QRS-SF = Questionnaire on Resources and Stress-Short Form, PANAS = Positive and Negative Affect Scales, *r* = Correlation coefficient, and CI = Confidence interval.

Family Resource Scale Measures

Four different versions of the FRS were used by the primary study investigators (Dunst & Leet, 1985; Palermo et al., 2017; Taylor, 1999; Van Horn et al., 2001). The Dunst and Leet (1985) scale was used in 10 studies, the Van Horn et al. (2001) scale was used in three studies, and the Palermo et al. (2017) and Taylor (1999) scales were each used in one study. The number of items used to compute the adequacy of family resource subscale scores ranged between 7 and 10 for basic resources, 5 and 17 for financial resources, and 6 and 10 for time availability.

The instructions for completing the different FRS scales were the same or similar to those in the original version of the scale (Dunst & Leet, 1985) except in two studies (Brody & Flor, 1997; Palermo et al., 2017). In these two investigations, financial and basic resources items were combined and the instructions were altered where respondents were asked to rate the adequacy of their financial resources to meet family needs (e.g., food, rent, pay bills, childcare, healthcare).

Psychological Health and Well-Being Measures

Nine different scales were used to measure psychological health and well-being. The *CES-Depression Scale* (Radloff, 1977) was used in six studies, the *Life Orientation Test* (Scheier & Carver, 1985) was used in two studies, the *Parenting Stress Index* (Abidin, 1997) was used in two studies, and six other scales were each used in one study (Bradburn & Caplovitz, 1965; Derogatis, 1993; Dunst, 1986; Friedrich et al., 1983; V. A. Johnson, 2016; Watson et al., 1988).

The health and well-being measures differed in terms of the scoring procedures. In instances where higher scores indicated poorer functioning, the signs of the correlation coefficients between the FRS subscale scores and health and well-being measures were reversed so that lower scores indicated better functioning. Dunst (in press-b) found no differences in the sizes of effect for the five different

psychological health and well-being measures (general health functioning, depression, psychological stress, parenting stress, and life satisfaction). The health and well-being measures, therefore, were combined for the analyses reported in this paper.

Methods of Synthesis

Meta-Essentials was used to perform the meta-analysis (Suurmond et al., 2017; Van Rhee et al., 2015). Fisher's z transformation of the zero-order correlations between the FRS subscale scores and the health and well-being measures were the sizes of effect for estimating the relationships between the independent and dependent measures. The z -scores were converted back to correlation coefficients for reporting purposes.

The Egger regression test and Begg and Mazumber rank correlation test were used to assess the presence of publication bias (Suurmond et al., 2017). Nonsignificant test results indicate no publication bias (van Aert et al., 2019).

The average, weighted correlation coefficient between each of the FRS subscale measures and the health and well-being measures were computed to estimate the size of effect between measures. Each analysis included the number of study samples (k), the total number of study participants (N), the weighted effect size (r) between the subscale scores and health and well-being measures, the 95% confidence interval for the average effect size, and the Z -test and p -value to determine if the sizes of effect were statistically significant. Random effects models were used because of the heterogeneity of the study samples and the scales used to measure health and well-being (Tables 2 and 3).

Q_{Between} (Q_B) was used to determine if the sizes of effect for the relationships between the three FRS subscales and outcome measures were similar or different. Q_B is analogous to a one-way between-group ANOVA for effect size data (Hedges, 1994). Post-hoc tests were used as indicated.

Weighted linear regression analysis (Suurmond et al., 2017) was used to determine if the number of FRS subscale items used to assess the adequacy of type of family resource moderated the relationships between the independent and dependent measures. This involved regressing the effect sizes in each study on the number of FRS subscale items to obtain the standardized regression coefficient and determine if the moderator was statistically significant. Separate moderator analyses were done for each FRS subscale.

RESULTS AND DISCUSSION

Publication Bias

Table 4 shows the results of the publication bias analyses. The observed and adjusted sizes of effect and their 95% confidence intervals were nearly identical for each type of family resource. Neither the Egger nor Begg-Mazumber tests were statistically significant. The results indicate that there was little or no publication bias. This most likely is related to the fact that of the 14 studies in the meta-analysis, only three were not published in peer-reviewed journals (V. A. Johnson, 2016; Levine, 2010; M. J.

Taylor, 1999). The absence of any publication bias strengthens the validity of the aggregated results of a meta-analysis (van Aert et al., 2019).

Table 4: Results of the Publication Bias Analyses

Family Resources	Observed Average z		Adjusted Average z		Egger Regression Test		Begg-Mazumber Rank-Order Test	
	z	95% CI	z	95% CI	t-test	p-value	Z-test	p-value
Basic Resources	.29	.23, .36	.27	.21, .33	0.23	.820	0.87	.386
Financial Resources	.30	.26, .33	.29	.26, .33	1.90	.080	1.49	.137
Time Availability	.51	.45, .57	.49	.44, .55	0.42	.690	0.10	.917

z = Fisher's transformation of the correlation coefficients.

Relationships Between Family Resources and Health and Well-Being

The results from the analyses of the relationships between each type of family resource measure and psychological health and well-being are shown in Table 5. The adequacy of each type of family resource was significantly related to the outcome measures as evidenced by the Z-test results. The results indicate that all three types of family resources were significantly related to the study participants' psychological health and well-being.

Table 5: Average Weighted Effect Sizes for the Relationships Between the Adequacy of Three Types of Family Resources and the Study Participants' Psychological Health and Well-Being

Family Resources	k	N	r	95% CI	Z-Test	p-value
Basic Resources	8	1449	.29	.17, .40	5.39	.000
Financial Resources	16	3270	.32	.25, .37	10.46	.000
Time Availability	9	1590	.49	.34, .61	6.76	.000

NOTES. k = Number of study samples, N = Total number of study participants, r = Average, weighted effect size, and CI = Confidence interval.

The fact that both basic resources and time availability were related to the health and well-being measures in addition to financial resources indicates that different types of family resources are important predictors of healthy psychological functioning. Findings from studies that included the types of family resources in Table 1 indicated that significant amounts of variance in health and well-being were accounted for after the influence of education, income, and occupational prestige were removed in the regression analyses (Dunst et al., 1988; Glesson et al., 2016; Smith et al., 2001). The pattern of results from the meta-analysis and these studies provide credence for Van Horn et al.'s. (2001) call for analysis of the adequacy of family resources at the FRS subscale level to isolate which types of resources are related to psychological health and well-being.

Between Type of Family Resources Comparison

The three between type of family resource subscale comparison was significant, $Q_B = 8.85$, $df = 2,30$, $p = .012$. Post-hoc analyses showed that the sizes of effects between basic resources and financial resources did not differ significantly, $Q_B = 0.20$, $df = 1,22$, $p = .657$, but that the size of effect for time

availability differed significantly from the sizes of effect for both basic resources, $Q_B = 7.41$, $df = 1,15$, $p = .006$, and financial resources, $Q_B = 7.61$, $df = 1,23$, $p = .006$. In the latter two post-hoc analyses, the size of effect between time availability and health and well-being was larger than the sizes of effect between basic and financial resources and the outcome measures.

The results from the between type of family resource comparisons point to the relative importance of the availability of time as a predictor of psychological health and well-being. Kooij et al. (2018) noted that “time provides individuals with a benchmark for orienting the self in the midst of myriad activities in work and nonwork life roles, such as learning, task performance, and *parenting*” (p. 867, italics added). Brotherson and Goldstein (1992) found that time availability was a factor influencing parents’ abilities to carry out child-rearing responsibilities in a manner consistent with Bronfenbrenner’s (1979) that the adequacy of family resources is important for parents to have the time to parent effectively. Research on time use in families indicates that allocation of time among family members is a condition that provides parents and other primary caregivers the time and energy to carry out parenting responsibilities in ways positively influencing health and well-being (Bianchi & Raley, 2005).

Moderator Analyses

Table 6 shows the results from the analyses regressing the effect sizes for the relationships between family resources and the health and well-being measures on the number of subscale items used to measure each type of family resource. The number of subscale items used to measure basic resources was not related to the size of effect with the health and well-being measures. The number of subscale items used to measure financial resources and time availability were both related to differences in the sizes of effect between the adequacy of family resources and health and well-being. The direction of the relationships between financial resources and health and well-being, and between time availability and health and well-being, were, however, in the opposite direction.

Table 6. Moderator Analyses of the Effects of the Number of Family Resource Scale Subscale Items

Family Resources	β	R^2	Z-test	p-value
Basic Resources	.11	1	0.43	.671
Financial Resources	-.44	19	2.69	.007
Time Availability	.66	44	3.63	.000

R^2 = Percent variance accounted for in the relationships between the type of family resources and well-being by the number of family resource subscale items.

The larger the number of items used to measure the adequacy of financial resources, the poorer was the participants’ health and well-being. A single item increase in the number of financial resources subscale items was associated with a .44 decrease in the participant’s health and well-being scores. Nineteen percent of the variance in health and well-being was accounted for by the number of financial

resources subscale items. The most reasonable explanation for the negative association is the fact three investigators changed the FRS scale instructions (Brody & Flor, 1997; Palermo et al., 2017) and/or included items that were measuring other types of family resources (Brody & Flor, 1997; Palermo et al., 2017; Taylor, 1999).

The larger the number of subscale items used to measure time availability, the better the participants' health and well-being. A single item increase in the number of time availability subscale scores was associated with a .66 increase in a participant's health and well-being score. Forty-four percent of the variance in health and well-being was accounted for by the number of time availability subscale items. This result is consistent with findings from research reviews where the availability of time to carry out everyday activities was found to be an important resource related to psychological health and well-being (e.g., Bianchi & Raley, 2005; Nomaguchi & Milkie, 2020).

Time availability may be an especially important family resource for parents of children with identified disabilities or medical conditions and in low socioeconomic status or impoverished households albeit for different reasons. Children with disabilities or chronic medical conditions often require care beyond that associated with typical parenting responsibilities (e.g., Haveman et al., 1997; Perrin et al., 2012). This would leave less time to pursue other family resources to satisfy individual and family needs in the absence of social support from others (e.g., Gleeson et al., 2016). Parents of children in low SES or impoverished households, out of necessity, often spend more time and effort to obtain basic resources to meet unmet family needs that rob parents of the time to attend to other family matters. (Bronfenbrenner (1975), for example, noted that "inadequate health care, poor housing lack of education, low income, and the necessity for full-time work...*rob parents of the time and energy to spend with their children*" (pp. 465-466, italics added).

CONCLUSION

Major Findings

Results showed that all three types of family resources (basic resources, financial resources, time availability) were related to the study participants' psychological health and well-being. The results are consistent with a basic tenet of family stress theories (McCubbin & Patterson, 1983; Olson & Stewart, 1991) and family systems theories (Emery, 2014; B. E. Johnson & Ray, 2016) that the adequacy of family resources is one family-related factor that explains variations in psychological functioning.

The results also indicated the relative importance of time availability as a factor associated with optimal positive and attenuated negative health and well-being. The size of effect between time availability and health and well-being was significantly larger than the effect sizes between basic and family resources and the study outcomes. The adequacy of time to engage in both parent and nonparent everyday activities may therefore be especially important in households where child or family demands, or both, interfere with carrying out parenting responsibilities in the absence of supports from

other family members or sources outside the home (Bianchi & Raley, 2005; Brotherson & Goldstein, 1992).

The contention that time availability is an especially important family resource is bolstered by the findings from the moderator analyses. Time availability subscale scores that included larger numbers of scale items were associated with larger sizes of effect compared to fewer numbers of items. Further investigation of which types of time availability indicators prove most important in terms of explaining variations in psychological health and well-being would most likely shed light on the nature of the relationship between adequacy of time and psychological functioning.

Contributions to Research and Practice

The meta-analysis described in this paper is part of a larger research study investigating the relationships between the adequacy of family resources and personal, parenting, family, and child functioning (Dunst, 2021). Studies that have used the *Family Resource Scale* (Dunst & Leet, 1985, 1987) to measure the adequacy of family resources used either the total scale score as a predictor variable or one or more subscale scales as the predictors of outcomes of interest. Findings from the meta-analysis of the relationships between the total FRS scale scores and psychological health and well-being indicated that the average size of effect between the independent and dependent measures was $r = .41$ (95% CI = .39, .41). This effect size is larger than that for basic resources and financial resources in this study (Table 5) but smaller than that for the relationship between time availability and the outcome measures (Table 5). This suggests that the total FRS score may be masking the importance of specific types of family resources in explaining variations in psychological functioning as predicted by Van Horn et al. (2001). Future research, therefore, should consider the use of FRS subscale scores in studies of the relationships between the adequacy of family resources and outcomes of interest.

The meta-analysis described in this paper is part of a line of research testing basic tenets of a family systems intervention model (Dunst, 2017). The model is based on theoretical and conceptual formulations of several family and social systems experts with a focus on the implications for intervention purposes (e.g., Bronfenbrenner, 1979; Garbarino & Abramowitz, 1992; Hobbs et al., 1984). The family systems model includes four interrelated intervention components (family needs and concerns, family strengths and hardiness, family resources and supports, and family-centered helping practices) and the empirical evaluation of the relationships with parent, family, and child functioning, including parents' and other primary caregivers' sense of caregiving competence and the ability to provide children development-enhancing learning opportunities.

Findings reported in this paper provide support for the hypothesized relationship between the adequacy of family resources and one dimension of individual family member functioning (psychological health and well-being). The results point to the importance of identifying the need for specific types of family resources as one way of optimizing the benefits of resource provision (Dunst et al., 1988).

Limitations

Notwithstanding the contributions of the meta-analysis to research and practice, there are several limitations of the research synthesis that need to be mentioned. First, the data for ascertaining the relationships between the adequacy of family resources and health and well-being are correlational which limits causal conclusions about the family resources-psychological functioning linkages. Second, the number of studies examining the effect sizes for basic resources and time availability are both less than 10 which may limit the generalizability of the findings (Table 5). Third, the fact that so few primary study investigators used the same scales to measure psychological health and well-being (Table 3) did not permit analysis of any differential effects for the relationships between each type of family resource and the different dimensions of psychological functioning (e.g., depression vs. life satisfaction). These limitations need to be considered in interpreting the results from the meta-analysis.

References

- Abidin, R. R. (1997). Parenting Stress Index: A measure of the parent-child system. In C. P. Zalaquett & J. Wood (Eds.), *Evaluating stress: A book of resources* (pp. 277-291). Scarecrow Education.
- Abidin, R. R. (2012). *Parenting Stress Index: Short form* (4th Ed.). Psychological Assessment Resources.
- Appelbaum, M., Cooper, H., Kline, R. B., Mayo-Wilson, E., Nezu, A. M., & Rao, S. M. (2018). Journal article reporting standards for quantitative research in psychology: The APA publications and communications board task force report. *American Psychologist*, *73*(1), 3-25. <https://doi.org/10.1037/amp0000191>.
- Bianchi, S. M., & Raley, S. B. (2005). Time allocation in families. In S. M. Bianchi, L. M. Casper, & B. R. King (Eds.), *Work, family, health, and well-being* (pp. 21-42). Lawrence Erlbaum Associates Publishers.
- Bradburn, N. M., & Caplovitz, D. (1965). *Reports on happiness: A pilot study of behavior related to mental health*. Adline Publishing.
- Brannan, A. M., Manteuffel, B., Holden, E. W., & Heflinger, C. A. (2006). Use of the Family Resource Scale in children's mental health: Reliability and validity among economically diverse samples. *Administration and Policy in Mental Health and Mental Health Services Research*, *33*(2), 182-197. <https://doi.org/10.1007/s10488-10006-10032-10488>.
- Brody, G. H., & Flor, D. L. (1997). Maternal psychological functioning, family processes, and child adjustment in rural, single-parent African American families. *Developmental Psychology*, *33*(6), 1000-1011. <https://doi.org/10.1037/0012-1649.1033.1006.1000>.
- Brody, G. H., Murry, V. M., Chen, Y.-F., Kogan, S. M., & Brown, A. C. (2006). Effects of family risk factors on dosage and efficacy of a family-centered preventive intervention for rural African Americans. *Prevention Science*, *7*, 281-291. <https://doi.org/210.1007/s11121-11066-10032-11127>.
- Bronfenbrenner, U. (1975). Is early intervention effective? In B. Z. Friedlander, G. M. Sterritt, & G. E. Kirk (Eds.), *Exceptional infant: Vol. 3. Assessment and intervention* (pp. 449-475). New York: Brunner/Mazel.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

- Brotherson, M. J., & Goldstein, B. L. (1992). Time as a resource and constraint for parents of young children with disabilities: Implications for early intervention services. *Topics in Early Childhood Special Education, 12*, 508-527. <https://doi.org/510.1177/027112149201200408>.
- Budescu, M., Sisselman-Borgia, A., & Taylor, R. D. (2018). Perceptions of adequate personal time and wellbeing among African American families and adolescents. *Journal of Child and Family Studies, 27*, 1763-1773. <https://doi.org/1710.1007/s10826-10018-11014-10827>.
- Citro, C. F., & Michael, R. T. (Eds.). (1995). *Measuring poverty: A new approach*. The National Academies Press.
- Derogatis, L. R. (1993). *Brief Symptom Inventory*. Pearson Assessment.
- Diener, E., & Oishi, S. (2000). Money and happiness: Income and subjective well-being across nations. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 185-218). MIT Press.
- Dunst, C. J. (1986). *Health and Well-Being Index: A short form for measuring parental health and well-being*. Winterberry Press.
- Dunst, C. J. (2017). Family systems early childhood intervention. In H. Sukkar, C. J. Dunst, & J. Kirkby (Eds.), *Early childhood intervention: Working with families of young children with special needs* (pp. 38-60). Routledge.
- Dunst, C. J. (2021). *Meta-analyses of the relationships between the adequacy of family resources and personal, parenting, family and child well-being and parenting beliefs and practices: Supplemental report*. <https://www.puckett.org/FRS/MetaAnalyses/SupplementalReport.pdf>.
- Dunst, C. J. (in press-a). Meta-analysis of the relationships between the adequacy of family resources and parenting beliefs and practices. *Journal of Psychology and Behavioral Science*.
- Dunst, C. J. (in press-b). Meta-analysis of the relationships between the adequacy of family resources and personal, family, and child well-being. *European Journal of Psychological Research*.
- Dunst, C. J., & Leet, H. E. (1985). *Family Resource Scale: Reliability and validity*. Winterberry Press.
- Dunst, C. J., & Leet, H. E. (1987). Measuring the adequacy of resources in households with young children. *Child: Care, Health and Development, 13*, 111-125. <https://doi.org/110.1111/j.1365-2214.1987.tb00528.x>.
- Dunst, C. J., Leet, H. E., & Trivette, C. M. (1988). Family resources, personal well-being, and early intervention. *Journal of Special Education, 22*, 108-116. <https://doi.org/110.1177/002246698802200112>.
- Dunst, C. J., Trivette, C. M., & Deal, A. G. (1988). *Enabling and empowering families: Principles and guidelines for practice*. Brookline Books.
- Dunst, C. J., Vance, S. D., & Cooper, C. S. (1986). A social systems perspective of adolescent pregnancy: Determinants of parent and parent-child behavior. *Infant Mental Health Journal, 7*, 34-48. [https://doi.org/10.1002/1097-0355\(198621\)198627:198621<198634::AID-IMHJ2280070105>2280070103.2280070100.CO;2280070102-B](https://doi.org/10.1002/1097-0355(198621)198627:198621<198634::AID-IMHJ2280070105>2280070103.2280070100.CO;2280070102-B).
- Emery, R. E. (2014). Families as systems: Some thoughts on methods and theory. In S. M. McHale, P. Amato, & A. Booth (Eds.), *Emerging methods in family research* (pp. 109-124). Springer International Publishing.
- Fink, S. V. (1995). The influence of family resources and family demands on the strains and well-being of caregiving families. *Nursing Research, 44*(3), 139-146.
- Friedrich, W. N., Greenberg, M. T., & Crnic, K. (1983). A short form of the Questionnaire on Resources and Stress. *American Journal of Mental Deficiency, 88*, 41-48.

- Garbarino, J., & Abramowitz, R. (1992). The ecology of human development. In J. Garbarino (Ed.), *Children and families in the social environment* (2nd ed., pp. 11-33). Aldine de Gruyter.
- Gleeson, J. P., Hsieh, C.-M., & Cryer-Coupet, Q. (2016). Social support, family competence, and informal kinship caregiver stress: The mediating and moderating effects of family resources. *Children and Youth Services Review*, 67, 32-42. <https://dx.doi.org/10.1016/j.childyouth.2016.1005.1012>.
- Haveman, M., van Berkum, G., Reijnders, R., & Heller, T. (1997). Differences in service needs, time demands, and caregiving burden among parents of persons with mental retardation across the life cycle. *Family Relations*, 46, 417-425. <https://doi.org/410.2307/585101>.
- Hedges, L. V. (1994). Fixed effects models. In H. Cooper & L. V. Hedges (Eds.), *The handbook of research synthesis* (pp. 285-299). Russell Sage Foundation.
- Herman, S. E., & Marcenko, M. O. (1997). Perceptions of services and resources as mediators of depression among parents of children with developmental disabilities. *Mental Retardation*, 35, 458-467. [https://doi.org/410.1352/0047-6765\(1997\)1035<0458:POSARA>1352.1350.CO;1352](https://doi.org/410.1352/0047-6765(1997)1035<0458:POSARA>1352.1350.CO;1352).
- Hobbs, N., Dokecki, P. R., Hoover-Dempsey, K. V., Moroney, R. M., Shayne, M. W., & Weeks, K. H. (1984). *Strengthening families*. Jossey-Bass Publishers.
- Howell, R. T., & Howell, C. J. (2008). The relations of economic status to subjective well-being in developing countries: A meta-analysis. *Psychological Bulletin*, 134(4), 536-560. <https://doi.org/510.1037/0033-2909.1134.1034.1536>.
- Johnson, B. E., & Ray, W. (2016). Family systems theory. In S. Smith (Ed.), *The Wiley Blackwell encyclopedia of family studies* (pp. 782-787). Wiley-Blackwell Publishing.
- Johnson, V. A. (2016). *Improving outcomes for families involved in child protective services through an enhanced understanding of residential mobility's impact on caregiver-child relationships*. (Publication No. 10111902) [Doctoral Dissertation, University of North Carolina at Charlotte]. ProQuest Theses and Dissertations Global
- Kooij, D. T., Kanfer, R., Betts, M., & Rudolph, C. W. (2018). Future time perspective: A systematic review and meta-analysis. *Journal of Applied Psychology*, 103(8), 867-893. <https://doi.org/810.1037/apl0000306>.
- Lavee, Y., McCubbin, H. I., & Patterson, J. M. (1985). The Double ABCX Model of family stress and adaptation: An empirical test by analysis of structural equations with latent variables. *Journal of Marriage and the Family*, 47(4), 811-825. <https://doi.org/810.2307/352326>.
- Lee, S., McHale, S. M., Crouter, A. C., Kelly, E. L., Buxton, O. M., & Almeida, D. M. (2017). Perceived time adequacy improves daily well-being: Day-to-day linkages and the effects of a workplace intervention. *Community, Work & Family*, 20(5), 500-522. <https://doi.org/510.1080/13668803.13662017.11365691>
- Levine, G. A. (2010). *The relation between family resources, child severity and parenting stress in parents of young children with autism*. [Honors Thesis, Vanderbilt University]. <http://discoverarchive.vanderbilt.edu/bitstream/handle/1803/4026/finalgabriellelevinethesis.pdf?sequence=1>.
- Lim, J.-W., & Zebrack, B. (2004). Caring for family members with chronic physical illness: A critical review of caregiver literature. *Health and Quality of Life Outcomes*, 2: 50, 1-9. <https://doi.org/10.1186/1477-7525-1182-1150>.
- McCubbin, H. I., & Patterson, J. M. (1983). The family stress process: The Double ABCX Model of adjustment and adaptation. *Marriage & Family Review*, 6(1-2), 7-37. https://doi.org/10.1300/J1002v1306n1301_1302.

- McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. *American Psychologist*, 53(2), 185-204. <https://doi.org/110.1037/0003-1066X.1053.1032.1185>.
- Munsell, E. P., Kilmer, R. P., Vishnevsky, T., Cook, J. R., & Markley, L. M. (2016). Practical disadvantage, socioeconomic status, and psychological well-being within families of children with severe emotional disturbances. *Journal of Child and Family Studies*, 25, 2832-2842. <https://doi.org/2810.1007/s10826-10016-10449-y>.
- Ngamaba, K. H., Armitage, C., Panagioti, M., & Hodkinson, A. (2020). How closely related are financial satisfaction and subjective well-being? Systematic review and meta-analysis. *Journal of Behavioral and Experimental Economics*, 2020(85), 101522. <https://doi.org/101510.101016/j.socec.102020.101522>.
- Nomaguchi, K., & Milkie, M. A. (2020). Parenthood and well-being: A decade review. *Journal of Marriage and Family*, 82(1), 198-223. <https://doi.org/110.1111/jomf.12646>.
- Olson, D. H., & Stewart, K. L. (1991). Family systems and health behaviors. In H. E. Schroeder (Ed.), *New directions in health and psychological assessment* (pp. 27-47). Hemisphere Publishing Corporation.
- Palermo, F., Ispa, J. M., Carlo, G., & Streit, C. (2017). Economic hardship during infancy and U.S. Latino preschoolers' sociobehavioral health and academic readiness. *Developmental Psychology*, 54(5), 890-902. <https://doi.org/810.1037/dev0000476>.
- Perrin, J. M., Gnanasekaran, S., & Delahaye, J. (2012). Psychological aspects of chronic health conditions. *Pediatrics in Review*, 33(3), 99-109. <https://doi.org/110.1542/pir.1533-1543-1599>.
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-401. <https://doi.org/310.1177/014662167700100306>.
- Rettig, K. D., & Bubolz, M. M. (1983). Perceptual indicators of family well-being. *Social Indicators Research*, 12, 417-438. <https://doi.org/410.1007/BF00300447>.
- Rowland, V. T., Dodder, R. A., & Nickols, S. Y. (1985). Perceived adequacy of resources: Development of a scale. *Home Economics Research Journal*, 14(2), 218-225. <https://doi.org/210.1177/1077727X8501400205>.
- Scabini, E. (2016). Family relationships: A long-lasting source of well-being. *Community Psychology in Global Perspective*, 2(1), 36-51. <https://doi.org/10.1285/i24212113v24212112i24212111p24212136>.
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, 4(3), 219-247. <https://doi.org/210.1037/0278-6133.1034.1033.1219>.
- Seaton, E. K., & Taylor, R. D. (2003). Exploring familial processes in urban, low-income African American families. *Journal of Family Issues*, 24, 627-644. <https://doi.org/610.1177/0192513X03024005003>.
- Siddaway, A. P., Wood, A. M., & Hedges, L. V. (2019). How to do a systematic review: A best practices guide for conducting and reporting narrative reviews, meta-analyses, and meta-syntheses. *Annual Review of Psychology*, 70, 747-770. <https://doi.org/710.1146/annurev-psych-010418-102803>.
- Smith, T. B., Oliver, M. N., & Innocenti, M. S. (2001). Parenting stress in families of children with disabilities. *American Journal of Orthopsychiatry*, 71(2), 257-261. <https://doi.org/210.1037/0002-9432.1071.1032.1257>.
- Suurmond, R., van Rhee, H., & Hak, T. (2017). Introduction, comparison, and validation of *Meta-Essentials*: A free and simple tool for meta-analysis. *Research Synthesis Methods*, 8, 537-553. <https://doi.org/510.1002/jrsm.1260>.
- Tay, L., & Diener, E. (2011). Needs and subjective well-being around the world. *Journal of Personality and Social Psychology*, 101(2), 354-365. <https://doi.org/310.1037/a0023779>.

- Taylor, M. J. (1999). *Family support and resources in families having children with disabilities*. ERIC Document Reproduction Service No. ED434430. <https://eric.ed.gov/?q=%22family+support+and+resources+in+families%22&id=ED434430>.
- Taylor, R. D., Budescu, M., & Gebre, A. (2014). Family financial pressure and maternal and adolescent socioemotional adjustment: Moderating effects of kin social support in low-income African American families. *Journal of Child and Family Studies*, 23, 242-254. <https://doi.org/210.1007/s10826-10012-19688-10828>.
- Umberson, D., & Thomeer, M. B. (2020). Family matters: Research on family ties and health, 2010-2020. *Journal of Marriage and Family*, 82(1), 404-419. <https://doi.org/410.1111/jomf.12640>.
- van Aert, R. C. M., Wicherts, J. M., & van Assen, M. A. L. (2019). Publication bias examined in meta-analyses from psychology and medicine: A meta-meta-analysis. *PLoS ONE*, 14(4), e0215052. <https://doi.org/0215010.0211371/journal.pone.0215052>.
- Van Horn, M. L., Bellis, J. M., & Snyder, S. W. (2001). Family Resource Scale revised: Psychometrics and validation of a measure of family resources in a sample of low-income families. *Journal of Psychoeducational Assessment*, 19, 54-68. <https://doi.org/10.1177/073428290101900104>.
- Van Rhee, H. J., Suurmond, R., & Hak, T. (2015). *User manual for Meta-Essentials: Workbooks for meta-analysis (Version 1.4)*. Erasmus Research Institute of Management, The Netherlands. www.irim.eur.nl/research-support/meta-essentials.
- Walsh, F. (1994). Healthy family functioning: Conceptual and research developments. *Family Business Review*, 7(2), 175-198. <https://doi.org/110.1111/j.1741-6248.1994.00175.x>.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070. <https://doi.org/1010.1037/0022-3514.1054.1066.1063>.