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Parental Competence, Parenting Stress, Family Harmony, and Perceived Available Support among Mothers with Children Aged 3-6 Years

Duygu Dincer¹

Istanbul Aydin University

E. Burcu Tunc²

Marmara University

Abstract

There is a growing body of research focused on examining family dynamics. This article reports on two studies. Study 1 aimed to develop a parental competence scale and examine its psychometric qualities. Data was gathered from 915 Turkish mothers with children aged 3-6 years. In order to evaluate the instrument's internal structure, exploratory (EFA) and confirmatory factor analyses (CFA) were performed. EFA revealed that there was a single factor structure consisting of 13 items. CFA confirmed that all items in the one-dimensional scale are compatible with the model and goodness of fit values were acceptable. Reliability analyses showed that the scale's internal consistency was high. Study 2 aimed to investigate the direct and indirect effects of parenting stress on parental competence and family harmony through the perceived available support. Data was obtained from 261 mothers with children ages 3-6 years. The results of the study revealed that the perceived available support not only mediated the relationship between parenting stress and parental competence, but also the relationship between parenting stress and family harmony. Findings were discussed in light of family dynamics literature.

Key Words

Family harmony • Mothers • Parental competence • Parenting stress • Perceived available support

¹ **Correspondance to:** Istanbul Aydin University, Faculty of Education, Department of Educational Sciences, Istanbul, Türkiye. E-mail: duygudincer@aydin.edu.tr **ORCID:** 0000-0003-2496-6902

² Marmara University, Faculty of Education, Department of Educational Sciences, Istanbul, Türkiye. E-mail: burcupehlivantunc@gmail.com **ORCID:** 0000-0002-8225-9299

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Introduction

Becoming a parent is an inherently transformative experience that brings about a multitude of novel physical, social, psychological, and financial responsibilities (Deater-Deckard, 1998; Vance & Brandon, 2017). The experience of sharing and fulfilling child-related responsibilities can often be stressful for many parents (Abidin, 1990; Anthony et al., 2005; Wang et al., 2023). Especially, meeting a preschool child's physical, mental, and emotional needs is one of the most critical responsibilities parents have throughout the family life cycle (Gladding, 2015). During this period, significant developments occur in the child's emotional, social, cognitive, linguistic, and motor abilities and parents have a crucial role in the acquisition of these skills (Ruiz-Zalibdar et al., 2018) and in the promotion of a sense of autonomy and competence in their child (Erikson, 1977). Nevertheless, it is also important for parents to cultivate their own sense of competence as caretakers (Gladding, 2015). Over time, some parents experience a growing sense of competence in addressing their children's needs, whilst others hold concerns over their ability to fulfill these responsibilities competently. The society in which individuals live is also important in this kind of self-reflection. Since parenting is a social role influenced by societal values, beliefs, traditions, and norms produced by the macro system (Bronfenbrenner, 1977; Kagitcibasi, 2005; 2017; Pearlin, 1989), individuals experience stress or tension when they encounter challenges and difficulties associated with their roles and responsibilities. As the primary caregiving responsibility for children often falls on mothers in many societies (Ecevit, 2010), the sense of responsibility they feel may lead them to question their own parenting competence and efficacy. Thus, mothers may feel more stressed about these responsibilities (Berryhill, 2015), and need to empower themselves with available social support resources (Belsky et al., 1984). In other words, mothers may need to build strong relationships with social support resources for managing their stress related to parental responsibilities, increasing their competence and creating a harmonious family system. To gain a deeper understanding of these family dynamics, the current study aimed to investigate the links between parenting stress, parental competence, family harmony, and perceived available support among mothers with early childhood children in the Turkish cultural context.

Parental Competence

A growing body of research in the field of family psychology indicates that child-rearing is an experience in which parents are concerned with their self-efficacy and competence. Although the concepts of parental self-efficacy and parental competence sometimes overlap in the literature because of their link with parental confidence in parenting abilities, some studies have shown that there are some nuances between them (Hess et al., 2004; Montigny & Lacharité, 2005; Sabatelli & Waldron, 1995). One of the nuances between them becomes apparent concerning the theoretical foundations. While parental self-efficacy is generally based on the self-efficacy theory (social cognitive theory) (Bandura, 1994, 1997), parental competence is mostly grounded in attachment theory (Bowlby, 1982; Teti & Candelaria, 2002) and parenting styles (Baumrind, 2005; Maccoby & Martin, 1983). An additional nuance emerges when considering the definitions of these concepts. In the extant literature, it is seen that the concept of parental self-efficacy is generally defined as "the degree to which the parent feels competent and confident in handling child problems" (Johnston & Mash, 1989, p. 167), "beliefs or judgments about one's competency or ability to be

successful in the parenting role” (Hess et al., 2004), and “the expectation caregivers hold about their ability to parent successfully” (Jones & Prinz, 2005, p. 342). Similarly, it is observed that parental competence is generally conceptualized as the “practical ability of parents to nurture, protect and educate their children, ensuring their sufficiently healthy development” (Barudy & Dantagnan, 2010, p. 34, cited by Reparaz et al., 2021). Another nuance arises based on the measurement of these concepts. According to Vance and Brandon (2017), parental self-efficacy is measured using self-reporting based on subjective perceptions. On the other hand, parental competence is measured through both parental self-reports and objective assessments or observations made by third parties (teachers, friends, etc.). It consists of key components such as warmth, acceptance, and sensitivity towards the child’s basic needs, social cues, and appropriateness in line with his/her level of development (Teti & Candelaria, 2002). In the present study, the term of parental competence is favored for indicating the sense of confidence pertaining to parental ability and skills. This choice was influenced by the fact that the scale used to measure this psychological construct was designed to encompass both parents’ and external parts’ (such as teachers’) expectations of a competent parent.

A comprehensive analysis of the existing body of literature demonstrated that studies on parental competence have focused on both different stages of the life cycle, including childhood (Townshend et al., 2016; Windhorst et al., 2019), adolescence and emerging adulthood (Dittman et al., 2016; Huey et al., 2020) and different stages of the family life cycle. In these studies, parental competence has been associated with numerous personal and relational outcomes (Jackson & Moreland, 2018). For instance, some studies have reported that higher levels of parental competence are linked with some personal outcomes such as well-developed coping skills, increased levels of general well-being (Steele et al., 2020) and emotional well-being, lower levels of stress, anxiety, and depression (Ho & Liang, 2021), higher levels of well-being, and positive mental health (Albanese et al., 2019; Ho & Liang, 2021; Osman et al., 2017). Other studies indicated that increased parental competence has been associated with some parental outcomes, such as effective parenting practices (Gilmore & Cuskelly, 2008), and parent-child relationships (Lamb, 1976). In this study, we focused on the parental competence of mothers in the stage of family with a young child in the family life cycle and examined the parental competence’s relationship with both a personal outcome (parental competence) and a relational outcome (family harmony).

Family Harmony

Family harmony is a concept that refers to “people’s balanced and well-aligned life with family members and friends, with the living environment, and with themselves (in terms of physical and mental health), as well as having a balanced family-work life, permeated with the benefits of mutual support and flourishing” (Ip, 2014, p. 737). It is one of the fundamental features of family relationships in collectivist societies and differs from the concept of family support, which is one of the healthy family functions in individualist societies, by emphasizing responsibilities towards the family (Oyserman et al., 2002). For instance, family harmony has a crucial place as a fundamental Confucian principle within Chinese society, since it is often considered an essential component in a family’s overall well-being and happiness (Lam et al., 2012). It is also associated with greater parental warmth and less parental control (Lau et al., 1990). Similarly, in Turkey, a country with a collectivist cultural structure (Hofstede, 2001), it has been determined that family harmony is one of the predictors of happiness (Demirci, 2022) and life satisfaction

(Duman-Kula et al., 2018). In these collectivist cultures, family harmony is considered a protective/risk factor for mental health and well-being (Duman-Kula et al., 2018; Kavikondala et al., 2016). It has also negative associated with parenting stress (Keller & Honig, 2004). The presence of family harmony and less conflict within the family system contributes to an enhanced capacity to get pleasure from enjoyable experiences, heighten overall life satisfaction, and lessen symptoms of depression (Cheung et al., 2020). This study focused on family harmony as an outcome variable and the effect of parenting stress on it.

Parenting Stress

Parenting stress is characterized by the experience of negative emotions by parents towards themselves and their children, with these unpleasant feelings being attributed to the demands and responsibilities associated with being a parent (Deater-Deckard, 1998; Teti et al., 1991). Abidin (1990) posited that parental stress is influenced by a complex interaction of three primary stressors: factors related to the parent, the child's specific qualities, and contextual factors. The present study focused on the factors associated with parents. The extant literature indicated that many couples transitioning into the family with a young child stage of the family life cycle want to adapt to the parenting identity and feel that they fulfill the parenting role effectively and competently (Gladding, 2015). However, due to rapid and significant social, economic, and technological developments, they face several problems, ranging from displaying practical and effective parenting skills to providing various resources or opportunities for their children. These difficulties place pressure and stress on parents (Bandura, 2009). Some factors, such as a large number of children (Hong & Liu, 2021), low income, inadequate social support, being single parent (Evans et al., 2008; Oddi et al., 2013) can increase this stress, while others such as adequate social support (Cohen & Wills, 1985; Manuel et al., 2012; Raikes & Thompson, 2005) reduce it. Previous research has shown a correlation between increased levels of parenting stress and many negative outcomes, including parental depression (Huang et al., 2014), separation anxiety (Deater-Deckard et al., 1994), a lower quality of life (Hsiao, 2018), sleep problems (McQuillan et al., 2019), and parental physical health problems (Hildingsson & Thomas, 2014). In addition, it was found that the perception of parental stress is influenced by gender, specifically highlighting that mothers of preschool children tend to perceive higher levels of parental stress than fathers (Skreden et al., 2012). From this point of view, we determined parenting stress as a predictor of parental competence and family harmony in this study.

Perceived Available Support

Bronfenbrenner's (1977) ecological perspective has posited that parents require social support resources to carry out their parental responsibilities effectively. Perceived available support refers to an individual's perceived capacity to obtain social support, and it is the recipient's subjective assessment of the likelihood of receiving assistance - emotional, informational, and practical - from their social network, including their friends, partners, family, and other relatives, in times of need (Cobb, 1976; Freeman et al., 2011). It includes both structural and functional components of interpersonal interactions, which have been measured for quantity and satisfaction. Social relationships and their links are structural characteristics of social support. The functional aspects of interpersonal relationships are the specific functions they serve. Functional support may be categorized into two distinct types: *perceived available support* and *support actually received* (Wethington & Kessler, 1986; Wills & Shinar, 2000). The concept of *received*

support refers to the distinct acts of help offered by individuals such as friends, family members and partners. In other words, it relates to an individual's impression of being valued and respected by others (Wethington & Kessler, 1986). The support recipient's subjective perception that friends, family, partners, etc. would help if required is called *perceived available support* (Barrera, 1986; Uchino, 2009). According to this conceptualization, the presence of a perceived sense of being cared for has the potential to positively influence one's health, regardless of the accuracy of this impression (Cobb, 1976). Similarly, research has suggested that parents who get higher levels of perceived emotional and instrumental support from their partners, family members, and friends have lower levels of parenting stress (Abidin & Brunner, 1995; Ostberg & Hagekull, 2000; Roggman et al., 1994) and greater levels of parental satisfaction (Carter et al., 2017). In this sense, social support has been identified as a protective factor against parental stress (Sharda et al., 2019). However, a dysfunctional familial atmosphere increases stress and provides less support for members, challenging mental health (Kavikondala et al., 2016). Based on these findings, perceived available support was determined as a mediator variable in this study.

Rationale and Purpose of the Study

The current study was conducted with two objectives. The purpose of Study 1 was to develop a new scale of parental competence for mothers with children aged 3 to 6 years. The scale aimed to measure the extent to which mothers feel competent in developing their children's emotional, social, and intellectual skills, ecological sensitivity, interests, and abilities. Although there are various psychological instruments to measure parental competence in the existing literature, the most widely used tool is the Parenting Sense of Competence Scale (PSOC) developed by Gibaud-Wallston, and Wandersman (1978). The psychometric properties of the PSOC that consists of 16 items and two dimensions, skill-knowledge and value-comforting, have been re-examined in a study conducted with Canadian mothers and fathers of children aged 4 to 9 years by Johnston & Mash (1989) and its sub-dimensions were renamed as satisfaction and efficacy. This scale was also adapted into Turkish by Cokamay Yilmaz (2018) and has been widely used in Turkey. However, recent studies show that the factor structure of the PSOC still needs to be improved (Gilmore & Cuskelly, 2008). As the family system and parenting are primarily formed based on culturally constructed roles and responsibilities and are developmentally sensitive (human lifecycle and family lifecycle), Study 1 aimed to assess parental competence using a psychological tool that is both culture-specific and responsive to development.

To develop a deeper understanding of the role of parenting stress on family life, Study 2 aimed to examine the direct and indirect effects of parenting stress on a personal outcome namely parental competence and a relational outcome namely family harmony via perceived available support (Figure 1). Social resources, or social support, are just as important as personal resources for coping with stress. Previous research has shown that parental stress (Deater-Deckard, 1998; Jackson & Huang, 2000; Webster-Stratton, 1998) and social support (Belsky et al., 1984) have a significant impact on parental competence, and parenting stress is also linked to family harmony (Keller & Honig, 2004). To the best of our knowledge, the relationships between parental stress, parental competence, family harmony, and perceived available support have not been examined together. This study would expand the extant literature to explore the relationships among these psychological structures.

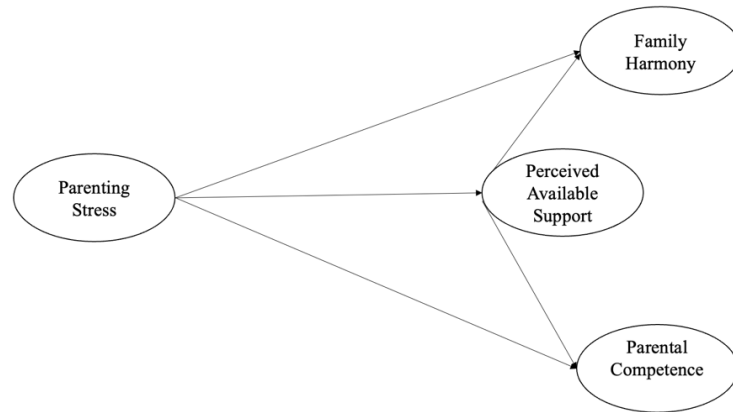


Figure 1. Tested model

Method

This research consisted of two parts, Study 1 and Study 2. The purpose of Study 1 was a scale development study to measure parental competence. The purpose of Study 2 was to establish and test a structural equation model to examine the relationships between perceived available support (PS), parenting stress (PST), family harmony (FH) and parental competence (PC).

Study Group for Study 1 and Study 2

In Study 1, a total of 915 mothers who had children aged between 3 and 6 were reached. In Study 2, a total of 261 mothers were recruited. The study group comprised a total of 1,176 mothers. The number of individuals for each stage is given in Table 1.

Table 1

Working groups for Study 1 and Study 2

Study groups	Scales	Statistical Procedures	N
Study 1	Parental Competence Scale	EFA for construct validity and Cronbach’s alpha and McDonald’s omega for internal consistency	473 mothers
	Parental Competence Scale	CFA for construct validity	442 mothers
Study 2	Family Harmony Scale - Short Form, Parent Stress Scale, Perceived Available Support Scale, Parental Competence Scale	Structural equation model (SEM) for model testing	261 mothers

While forming the study group, it was tried to reach maximum diversity in terms of age, education level and number of children. In the group of 1,176 mothers, 49% were between the ages of 30 and 34, 23.4% were between the ages of 25 and 29, 20% were between the ages of 35 and 39, 6.1% were between the ages of 40 and 44, and 1.5% were between the ages of 20 and 24. Besides that, 62.7% of mothers have a bachelor's degree, while 15% have a high school diploma, 11.5% a graduate degree, 4.4% a secondary school diploma, 2.7% an associate degree, 2.2% a doctoral degree, and 1.5% a primary school diploma. More than half of mothers (51.5%) have two children, while 28.5% have one, 15.4% have three, 3.3% have four, .8% have five, and 0.5% have six.

Research Instruments and Data Analysis for Study 1

Within the scope of Study 1, the Parental Competence Scale (PCS) was developed. The scale items were created based on both a comprehensive review of the existing literature on parental competence and informal meetings with mothers of 3-6-year-old children and teachers working with children in this period. Thus, the Parental Competence Scale was grounded in theory and practice, and a total of 23 items were generated. This item pool was assessed by four specialists in assessment and evaluation, psychological counseling, preschool education, and the Turkish language. Consistent with experts' viewpoints, five items considered inappropriate for the original intent of the scale were removed, resulting in the development of a final trial version consisting of 18 items. The answer format for the scale items was a five-point Likert scale. (*1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = Always*).

To assess the construct validity of the scale in the context of validity studies, exploratory factor analysis (EFA) was conducted as the initial step. Principal-axis factor analysis was used due to its reputation as one of the most effective methodologies for understanding the underlying structure of the items (Costello & Osborne, 2005). First, the KMO value was interpreted within the context of factor analysis. As the KMO value approaches a value of 1, it is regarded to be excellent, and above .70 is considered sufficient. The scree plot graphics and factor loadings were examined to determine the appropriate number of factors and select items to be incorporated into the scale. It was ensured that the minimum factor loading was .32. (Kline, 2011; Tabachnick & Fidell, 2007). After determining the number of factors and selecting items to be included in the scale, the statistical analysis of the remaining items was conducted. This analysis involved calculating the item-total test correlation and examining the differences in mean scores between the lower and upper groups, which comprised 27% of the sample. The lowest value for the item-total test correlation is expected .30, and the difference between the item mean scores of the 27% lower and upper groups is anticipated to be statistically significant. Significant t-values for differences between the lower and upper groups are regarded as evidence of the item's discrimination (Erkuş, 2012). The reliability of the scale's results was assessed by performing Cronbach's alpha coefficient and McDonald's omega.

Confirmatory factor analysis (CFA) was performed following the release of the scale's structure and reliability. The CFA method is used to determine the degree of association between observable variables and their latent constructs (Jöreskog & Sörbom, 2001). The unidimensional structure identified in the EFA was further examined using CFA and assessed using goodness-of-fit statistics. In this context, the following statistical measures were reported in this study: Chi-square to degrees of freedom ratio (χ^2/df), Root Mean Square Error of Approximation (RMSEA), 90 Percent Confidence Interval for RMSEA, Normed Fit Index (NFI), Non-Normed Fit

Index (NNFI), Parsimony Normed Fit Index (PNFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI), Relative Fit Index (RFI), Root Mean Square Residual (RMR), Standardized RMR, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Parsimony Goodness of Fit Index (PGFI) values (Hu & Bentler, 1999; Kline 2011; Şimşek, 2007; Tabachnick & Fidell 2007; Thompson 2004). Additionally, the t-values of the items were examined. Items in the model that possess t-values above 1.96 and demonstrate statistical significance ($p < .05$) suggest that these items are consistent with the model and must be kept in the scale.

Research Instruments and Data Analysis for Study 2

Data was gathered using the Family Harmony Scale - Short Form, the Parental Competence Scale, the Parent Stress Scale, the Perceived Available Support Scale and the demographic information sheet.

Family Harmony Scale - Short Form. The Family Harmony Scale – Short Form developed by Kavikondala et al. (2015) to measure family harmony consists of five items (e.g., “*I am proud of my family.*”). It is responded to on a 5-point Likert-type rating form ($1 = Strongly disagree, 5 = Strongly Agree$). Higher scores on the scale indicate higher family harmony. It was determined that the scale had a single-factor structure and fit data well in the original study. The Cronbach’s alpha reliability coefficient of the scale was calculated as .92. The scale was adapted to Turkish culture by Duman Kula et al. (2018) and the Cronbach’s alpha coefficient was calculated as .91. In the present study, both Cronbach’s alpha and McDonald’s omega were computed as .92.

Parental Competence Scale. The Parental Competence Scale was developed by the researchers of this study to measure the extent to which mothers feel competent in developing their children's emotional, social, and intellectual skills, ecological sensitivity, interests, and abilities. It consists of 13 items (e.g., “*I prepare environments for my child that support their existing abilities.*”, “*I provide opportunities for my child to develop different interests*”) scored on a 5-point Likert-type rating form. Higher scores on the scale indicate higher parental competence. The validity and reliability findings of the scale were reported in the findings section of this study.

Parent Stress Scale. The Parent Stress Scale (Kaymak Ozmen & Ozmen, 2012) is a tool for assessing the stress that parents experience as a result of their daily interactions with their children. The scale is comprised of a single-factor structure. The 16-item scale (e.g., “*The main source of stress in my life is having a child.*”) is scored on a 4-point Likert-type rating form ($Never = 1, Always = 4$). High scores on the scale indicate higher levels of parenting stress. In the original study, the Cronbach’s alpha internal consistency reliability value of the scale was calculated to be .85. In the present study, both Cronbach’s alpha and McDonald’s omega were computed as .91.

Perceived Available Support Scale. The Perceived Available Support Scale developed by Schulz and Schwarzer (2003) is a part of the Berlin Social Support Scales. It measures perceived emotional and instrumental support. The scale consists of 8 items (e.g., “*Whenever I am sad, there are people who cheer me up.*”) and two sub-dimensions, namely emotional support and instrumental support, and is scored on a 5-point Likert-type rating form. Cronbach’s alpha reliability coefficient was calculated as .83 for the overall scale in the original scale development study. The scale was adapted to Turkish culture by Kapkiran & Kapkiran (2010). Cronbach’s alpha values were calculated as $\alpha = .88$ for the overall scale, $\alpha = .80$ for the emotional social support subscale, and $\alpha = .83$ for the instrumental social

support subscale in the adaptation study. In the present study, both Cronbach's alpha and McDonald's omega were computed as .94.

In Study 2, it was examined the mediating role of perceived available support in the relationship between parenting stress and both family harmony and parental competence. This analysis was run using the LISREL 8.51 program. The maximum likelihood is used as the estimation method, considering the probability of being affected by the sample size and distribution of the fitted values is less than with other methods (Hu & Bentler, 1998). The measurement model was first estimated before the structural model was performed. The measured variables for perceived available support, parenting stress, and parental competence were generated using sum scores of subfactors for each latent construct and parcel. Item parceling is a method for normalizing the distribution of indicators and increasing their reliability. For each latent variable, indicators as parcels were constructed by rank-ordering the items by the size of the item-total correlation and summing the sets of items to obtain equivalent indicators for those constructs (Little et al., 2002). Since family harmony is a five-item scale, the parcel was not created. The parenting stress and parental competence constructs were defined using item-parceling because they only contain a single factor. The operationalization of the perceived available support variable was based on the sum of the subfactor scores for emotional support and instrumental support. The normality of the variables were tested using skewness and kurtosis values. Obtained values were less than .97, ranging from -.09 to -.92 for skewness and from .10 to .97 for kurtosis, demonstrating that variables are normally distributed in the sample.

Bootstrap analysis was performed to examine the mediation role of perceived available support in the relationship between parenting stress and both family harmony and parental competence. Testing the role of mediator variables with bootstrapping and determining whether indirect paths are nonzero strengthens the testing of the established model (MacKinnon et al., 2002; Shrout & Bolger, 2002). This analysis was carried out at a 95% confidence interval and the number of bootstrap samples was adjusted to 5000. The absence of a "0" value between lower (BootLLCI) and upper (BootULCI) bootstrap values has been interpreted as indicating that the effect of the mediator variable is statistically significant (Hayes, 2018).

Results

Study 1

Structural Validity

EFA and CFA were utilized to assess the construct validity of the scale results. During the first stage, the scale comprising 18 items was administered to 492 mothers. The principal-axis factor analysis was conducted on a sample of 473 mothers, after excluding 19 extreme values before the analysis. The data's suitability for factor analysis is indicated by the KMO value of .91 and the significant result of Barlett's Test of Sphericity ($\chi^2 = 2350.43$, $df = 78$). A one-factor structure was identified as a consequence of the principal-axis factor analysis (Figure 2). When determining the number of factors, ensuring that the eigenvalue associated with each factor is equal to or greater than 1.00 is recommended (Thompson, 2004). When determining the appropriate number of factors, it is recommended to consider several criteria. These include ensuring that the eigenvalue of each factor is equal to or

greater than 1.00 (Thompson, 2004), observing sharp declines in the scree plot, which is based on the eigenvalue, as well as high acceleration and relative flattening after a certain cut-off point (Fabrigar et al., 1999). Furthermore, it is important to consider factor loadings that are at least .32 (Kline, 2011; Tabachnick & Fidell, 2007). The explained variance of the single-factor structure was determined to be 38.14%. Since the factor loadings of the five items regarding the one-dimensional structure were not sufficient, they were excluded from the scale and the initial, common variance and factor loading values of the remaining 13 items are given in Table 2.

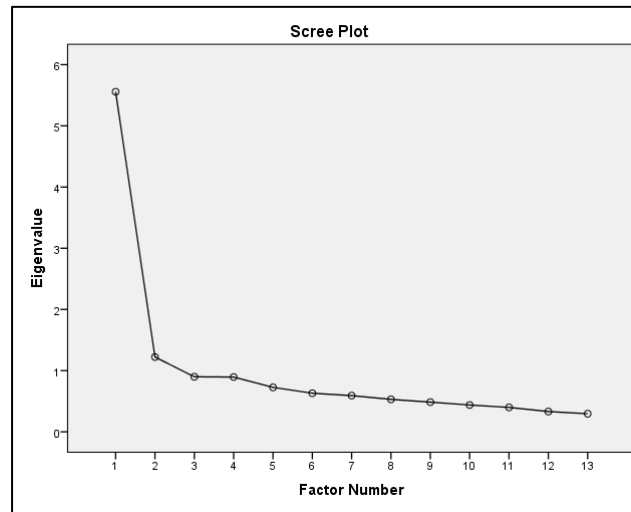


Figure 2. Scree plot for the Parental Competence Scale

Table 2

Factor structure of the Parental Competence Scale and factor loadings

Item no	Initial	Common variance	Factor loading
I1	.58	.53	.79
I2	.52	.44	.67
I3	.50	.49	.70
I4	.46	.46	.68
I5	.45	.45	.67
I6	.40	.41	.64
I7	.53	.41	.64
I8	.32	.33	.57
I9	.44	.35	.59
I10	.37	.33	.57
I11	.26	.25	.50
I12	.27	.26	.51
I13	.36	.26	.51

Explained variance: 38.14%

As shown in Table 2, the factor loadings ranged from .51 to .79, and the common variance value was .26, which is the smallest. CFA was used to test the 13-item, one-dimensional structure obtained from principal-axis factor analysis. Modifications were made to achieve better-fit indices. The modifications were the identification of error covariances among items I1-I2 and I7-I13. Table 3 provides the unstandardized factor loading, standard error (SE) and t-values demonstrating the relationship between the items and the model.

Table 3
Unstandardized factor loading, SE and t values obtained from CFA

Item No	Unstandardized factor loading	SE	t-value
I1	.29	.44	8.15
I2	.36	.41	10.39
I3	.45	.40	12.59
I4	.42	.28	14.35
I5	.43	.33	13.41
I6	.43	.29	14.24
I7	.37	.27	10.51
I8	.25	.17	10.95
I9	.35	.23	11.74
I10	.39	.42	11.03
I11	.29	.29	9.97
I12	.42	.40	11.75
I13	.41	.23	14.32

As shown in Table 3, t-values ranged from 8.15 to 14.35, and all values were significant and greater than 1.96. Therefore, all items on the one-dimensional scale were determined to be compatible with the model. Excellent and acceptable fit values for fit indices and fit index values determined by CFA can be found in Table 4.

Table 4
Perfect and acceptable fit values for fit indices and fit index values obtained from CFA

Reviewed Indices of Fit	Perfect Fit Criteria	Acceptable Fit Criteria	Achieved Fit Indexes	Conclusion
χ^2/sd	$0 \leq \chi^2 / sd \leq 2$	$2 \leq \chi^2 / sd \leq 5$	3.38	Acceptable
RMSEA	$.00 \leq RMSEA \leq .05$	$.05 \leq RMSEA \leq .08$	.07	Acceptable
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$	.90	Acceptable
NNFI	$.95 \leq NNFI \leq 1.00$	$.90 \leq NNFI \leq .95$	.90	Acceptable
PNFI	$.95 \leq PNFI \leq 1.00$	$.50 \leq PNFI \leq .95$	.72	Acceptable
CFI	$.95 \leq CFI \leq 1.00$	$.90 \leq CFI \leq .95$	.92	Acceptable
IFI	$.95 \leq IFI \leq 1.00$	$.90 \leq IFI \leq .95$	.92	Acceptable
SRMR	$.00 \leq SRMR \leq .05$	$.05 \leq SRMR \leq .10$	.05	Acceptable
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI \leq .95$	.93	Acceptable
AGFI	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI \leq .90$	.90	Acceptable
PGFI	$.95 \leq PGFI \leq 1.00$	$.50 \leq PGFI \leq .95$	.64	Acceptable

$\chi^2= 213.36$, $df= 63$, 90% Probability Confidence Interval for RMSEA = (0.06 ; 0.08)

Reliability and Item Statistics

Both Cronbach Alpha coefficient and McDonald's omega were computed as .88. The statistical data about the items is shown in Table 5. As shown in Table 5, the corrected item-total correlations for the items on the scale ranged from .47 to .68. These values indicate that the items can distinguish individuals based on the measured structure. The t-values ranged from 12.95 to 20.93 and were statistically significant ($p < .01$). Using t-tests for independent samples, the differences between the item scores of the 27% lower and upper groups were examined. The obtained t-values proved that the items distinguish between individuals with and without the measured feature.

Table 5

Results of item analysis

Item no	Average	Standard deviation	Corrected item-total correlation	If item dropped (Cronbach's Alpha)	If item dropped (McDonald's Omega)	t
I1	3.98	.70	.68	.87	.87	19.18*
I2	3.95	.74	.62	.88	.88	17.09*
I3	4.07	.73	.66	.87	.87	20.93*
I4	4.06	.73	.64	.87	.88	19.00*
I5	4.12	.68	.63	.87	.88	16.61*
I6	4.23	.72	.60	.88	.88	15.71*
I7	4.29	.61	.60	.88	.88	19.04*
I8	4.59	.56	.54	.88	.88	15.27*
I9	4.43	.59	.55	.88	.88	16.81*
I10	3.94	.75	.54	.88	.88	13.93*
I11	4.43	.61	.47	.88	.88	13.36*
I12	4.29	.68	.48	.88	.88	13.97*
I13	4.33	.59	.47	.88	.88	12.95*

Study 2

Before performing the structural model, the measurement model was tested using the data collected from 261 mothers. Correlations between observed variables are shown in Table 6, while correlations between latent variables are shown in Table 7.

Table 6

Means, standart deviations and correlations among the observed variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 F1	4.01	.97	1	.73	.70	.60	.73	.38	.41	-.40	-.39	-.44	-.45	.22	.28	.26	.26
2 F2	3.88	.92		1	.80	.62	.77	.34	.38	-.41	-.38	-.40	-.43	.26	.26	.26	.26
3 F3	3.93	.89			1	.63	.71	.26	.31	-.34	-.26	-.32	-.38	.15	.20	.19	.15
4 F4	4.39	.82				1	.70	.32	.37	-.21	-.23	-.25	-.27	.12	.15	.13	.15
5 F5	3.94	.95					1	.40	.41	-.37	-.38	-.38	-.41	.24	.29	.25	.30
6 ES	10.99	2.60						1	.82	-.33	-.33	-.40	-.37	.31	.42	.39	.31
7 IS	10.82	2.95							1	-.31	-.32	-.41	-.37	.23	.31	.30	.21
8 PRCLS1	10.86	3.20								1	.72	.67	.73	-.41	-.42	-.43	-.47
9 PRCLS2	10.10	3.15									1	.71	.73	-.36	-.43	-.41	-.39
10 PRCLS3	11.49	3.42										1	.71	-.34	-.37	-.40	-.34
11 PRCLS4	9.07	3.14											1	-.46	-.51	-.50	-.47
12 PRCLC1	12.65	1.67												1	.64	.66	.75
13 PRCLC2	11.81	1.82													1	.83	.68
14 PRCLC3	11.60	2.01														1	.62
15 PRCLC4	16.35	2.28															1

Notes: N=261

F1-F5: Family Harmony, ES: Emotional Support IS: Instrumental Support

PRCLS1-PRCLS4: Four parcels of Parenting Stress, PRCLC1-PRCLC4: Four parcels of Parental Competence

The correlations between the latent variables, as seen in Table 7, showed a moderate level of correlation. More specifically, as shown in Table 7, parenting stress was negatively correlated with family harmony ($r = -.53, p < .05$), perceived available support ($r = -.47, p < .05$) and parental competence ($r = -.60, p < .05$). Perceived available support was positively associated with parental competence ($r = .44, p < .05$) and family harmony ($r = .50, p < .05$). Futhermore, there was a positive significant relationship between parental competence and family harmony ($r = .36, p < .05$). The unstandardized factor loadings, standard errors, and t-values for the measurement model are shown in Table 8, and the standardized parameter estimates for the measurement model are shown in Figure 3.

Table 7

Correlations among the latent variables

Latent variables	1	2	3	4
1 Family harmony	1.00	.50*	-.53*	.36*
2 Perceived available support		1.00	-.47*	.44*
3 Parenting stress			1.00	-.60*
4 Parental competence				1.00

Notes: $N=261$, $*p < .05$

Table 8

Unstandardized factor loadings, standard errors, and t-values for the measurement model.

	Unstandardized factor loading	SE	t
FH			
1 F1	.79	.05	15.52
2 F2	.83	.04	18.35
3 F3	.77	.04	17.09
4 F4	.59	.04	13.02
5 F5	.82	.05	16.99
PS			
6 ES	2.37	.14	16.42
7 IS	2.62	.17	15.83
PST			
8 PARCELS1	2.67	.17	16.09
9 PARCELS2	2.67	.16	16.46
10 PARCELS3	2.81	.18	15.75
11 PARCELS3	2.73	.16	17.16
PC			
12 PARCELC1	1.26	.09	13.86
13 PARCELC2	1.65	.09	18.34
14 PARCELC3	1.78	.10	17.62
15 PARCELC4	1.70	.12	13.63

The test of the measurement model resulted in acceptable goodness-of-fit statistics: $\chi^2/df = 2.56$, RMSEA = .08 (90% confidence interval for RMSEA = .06; .09), NFI = .93, NNFI = .94, PNFI = .74, CFI = .95, IFI = .95, RFI = .91, RMR = .20, SRMR = .04, GFI = .90, AGFI = .86, PGFI = .63. Following the assessment of the measurement model, the structural model was tested. Figure 4 shows standardized parameter estimates for the structural model.

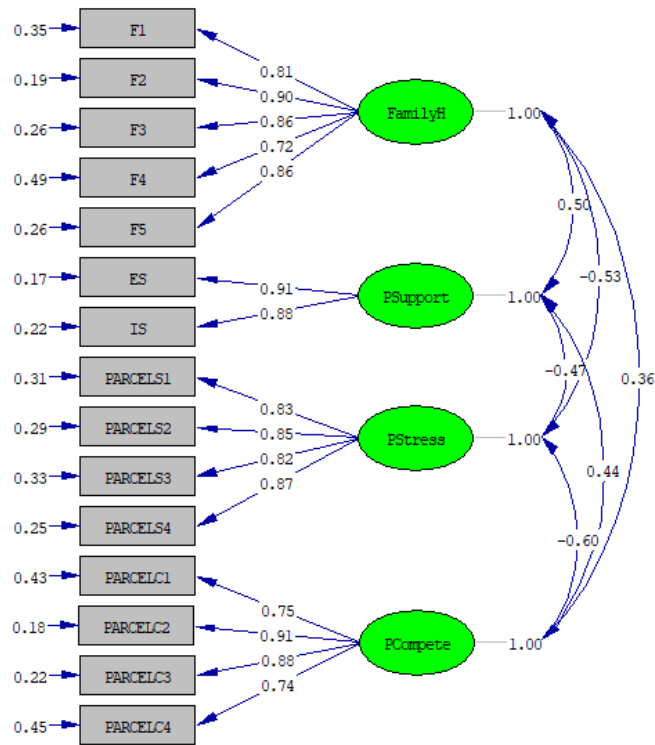


Figure 3. Standardized parameter estimates for measurement model

The test of the structural model resulted in acceptable goodness of fit statistics: $\chi^2/sd = 2.53$, RMSEA = .08, (90% confidence interval for RMSEA = .06; .09), NFI = .93, NNFI = .94, PNFI = .75, CFI = .95, IFI = .95, RFI = .91, RMR = .20, SRMR = .04, GFI = .90, AGFI = .86, PGFI = .64.

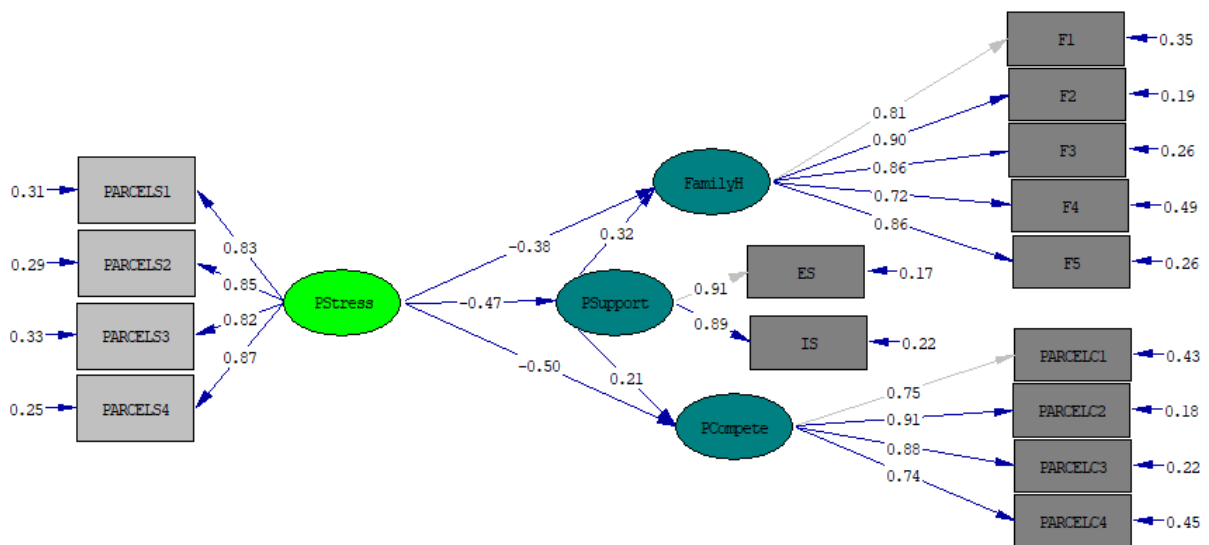


Figure 4. Standardized parameter estimates for the structural model

Standardized estimates for the paths in the model are shown in Figure 4. As seen in Figure 4, the estimated correlation between parenting stress and family harmony was $-.53$; however, when the mediator (perceived available support) was included in the model, the direct effect of parenting stress on family harmony was reduced to $-.38$. Clearly, the relationship between parental stress and family harmony was partially mediated by perceived available support, as evidenced by the findings. The estimated correlation between parenting stress and parental competence was $-.60$, and the direct effect of parenting stress on parental competence decreased to $-.50$ when the mediator (perceived available support) was added to the model. That is, the relationship between parenting stress and parental competence was partially mediated by perceived available support. Table 9 shows the bootstrap analysis results, which assessed the statistical significance of the mediation effect of perceived available support in the relationship between parenting stress and both family harmony and parental competence.

Table 9

Bootstrap analysis results

Model 1: Perceived available support between parenting stress and family harmony			
Standardized indirect effect	Boot standard error	BootLLCI (Lower value)	BootULCI (Upper value)
-.34	.09	-.52	-.15
Model 2: Perceived available support between parenting stress and parental competence			
-.16	.04	-.25	-.08

In Model 1, the standardized value for the lower bound was $-.52$, while the standardized value for the upper bound was $-.15$. Significant mediation is inferred when the upper and the lower limits of the 95% CI do not include zero. Based on the absence of the value “0” within this range, so it can be said that the mediation role of perceived available support between parenting stress and family harmony is statistically significant.

In Model 2, the standardized value for the lower bound was $-.25$ and the standardized value for the upper bound was $-.08$. Because of the absence of the value “0” within this range, it can be inferred that the mediation role of perceived available support between parenting stress and parental competence is statistically significant.

Discussion, Conclusion & Suggestions

This study was carried out with two purposes. The objective of Study 1 was to develop and examine the psychometric properties of the Parental Competence Scale, an original instrument designed to assess the level of perceived parental competence among mothers with 3-6-year-old children in a large sample within the Turkish cultural context. For this purpose, first of all, the item pool of the scale was created. After this stage, necessary corrections were made to the items based on expert opinions, and the scale became ready for pre-application. The scale’s validity (EFA and CFA), reliability (internal consistency), and item analyses were carried out. The objective of Study 2 was to examine the direct and indirect effects of parenting stress on parental competence and family harmony via perceived available support.

In Study 1, EFA results showed that the scale displayed a single-factor structure consisting of 13 items, with a high level of explained variance. The scale’s 13-item format will make it a valuable tool for large-scale research and help to reduce participant and operational burdens. With a single-factor structure explaining 38.14% of the overall

variance, it's clear that the items on the scale are collected satisfactorily into a single component. As [Çokluk et al. \(2012\)](#) stated, a 30% or more variance explained in single-factor designs in social sciences may be considered sufficient. In addition, considering that the two-factor structure of the Parenting Sense of Competence (PSOC), developed by [Gibaud-Wallston and Wandersman \(1978\)](#) and one of the most frequently used scales in the literature explained 36% of the total variance ([Gilmore & Cuskelly, 2008](#)), it is a pretty good finding that the one-factor structure of the Turkish Parental Competence Scale explained 38.14% of the total variance. In this single-factor structure, the factor loading values of the items varied between .50 and .79. According to [Büyüköztürk \(2010\)](#), factor loading values should be .45 or higher. From this point of view, it can be said that the factor loading values of the items in the scale are well. Besides that, after identifying error covariances between Item 1 - Item 2 and Item 7 - Item 13, it was determined that CFA results showed that the scale fitted the data well, providing support for the single-factor structure and demonstrating an acceptable level of goodness of fit. Cronbach's alpha and McDonald's omega values, which were calculated within the scope of reliability analysis, also revealed that the scale showed a high level of internal consistency. Although test-retest reliability and criterion-related validity studies were not performed in Study 1, EFA, DFA, item analysis and internal consistency analyses showed that the scale is a valid and reliable tool. In addition, the data collected in three distinct phases for the scale ensures that the data conform to the unidimensional structure, which is a study's strength.

In Study 2, analyses demonstrated that parenting stress was negatively associated with parental competence and after perceived available support was included in the model, direct effect of parenting stress on parental competence reduced. This finding indicates that perceived available support mediates the link between parenting stress and parental competence. More specifically, mothers who perceive more parenting stress would experience less parental competence, while mothers who receive more social support would experience less parenting stress and more parental competence. Consistent with these findings, previous research has supported that higher levels of parental stress are associated with lower levels of parental competence ([Gondoli & Silverberg, 1997](#); [Jackson & Huang, 2000](#)) and adequate social support can reduce the negative effects of increased parental stress ([Perez & Rubio, 2023](#); [Rodgers, 1993](#)). According to [Hoover-Dempsey et al. \(2005\)](#), parents who experience less stress feel more competent in their parental role, demonstrating more confidence in their ability to nurture their children. Ecological and systemic standpoints have suggested that social support plays a crucial role in either strengthening or weakening parental competence ([Belsky et al., 1984](#); [Cochran & Brassard, 1979](#)). The findings of the present study may also have a culture-specific aspect. [Gülerce \(1996\)](#) proposed, based on her research on family psychological patterns in Turkey, that mothers take greater ownership of the family system than other family members, commit a substantial amount of personal resources to the system, and are proud of the family's competence. On the basis of this argument, it can be assumed that mothers tend to consider parental competence as a crucial aspect of achieving family competence, and as a result, they are more likely to question their own competence levels and experience heightened parental stress.

Furthermore, Study 2 showed that parenting stress was negatively related to family harmony and after perceived available support was entered into the model, the direct effect of parenting stress on family harmony reduced. This finding points out that perceived available support mediates the link between parenting stress and family harmony.

That is, mothers who perceive more parenting stress would perceive less family harmony, while mothers who receive more social support would perceive less parenting stress and more family harmony. This finding indicates that mothers' beliefs in their competence as parents and their perceptions of family harmony increase as their subjective perceptions that friends, partners, family, and other people will assist them in times of need increase. Family harmony is interconnected with the concepts of "interconnectedness," "interdependent self," "interdependence with others," "sense of closeness," and "relatedness" in the interpersonal relationships literature (Kjell et al., 2016, p. 912) and a highly effective kind of interpersonal harmony (Demirci, 2022). This concept primarily reflects the perspective of collectivist cultures regarding family relationships (Oyserman et al., 2002) and is widely recognized as a fundamental component of effective family functioning in collectivist societies, such as China, Turkey, etc. In a qualitative study conducted by Lam et al. (2012) with Chinese individuals explored that harmonious families exhibit characteristics such as open communication, mutual respect, and dedicating quality time to one another, while experiencing little conflict. In another study conducted by Demirci (2022) in Turkey found that family harmony predicts flourishing indirectly via interdependent happiness and individual harmony in life. In addition, while some studies indicated that the presence of family harmony can function as a protective factor against the negative effects of stress (Keller & Honig, 2004), the current study demonstrated that parenting stress undermines family harmony but that available social support functions as a buffer, reducing the negative effect of parental stress on family harmony. Recent research indicated that in families that value family harmony, individuals use two approaches to improve it: "disintegration avoidance" and "harmony enhancement." Individuals make sacrifices to maintain harmonious relationships and avoid open conflicts in families that promote inner harmony through disintegration avoidance. In contrast, members of families that practice harmony enhancement to attain inner harmony engage in open communication and problem-solving while maintaining respect for one another (Cheung et al., 2020). In the present study, the negative relationship between parenting stress and family harmony could be linked to mothers' inability to discuss stressful parental circumstances in an open manner and with mutual respect as their negative emotions and perceptions about parenting increase. The availability of support resources may increase the likelihood that mothers will be able to resolve stressful parental issues through open communication and mutual respect, thereby contributing to family harmony.

This study confirmed the influence of parenting stress on parental competence and family harmony. It also provided an empirical foundation for empowering mothers with children between the ages of 3 and 6 regarding parental abilities. Utilizing the obtained findings in early childhood education programs can enhance the effectiveness of future research and practices. Given the significance of parental competence in fostering positive parenting outcomes (Martínez-González et al., 2016), developing an intervention program to proactively and preventatively enhance parenting competencies among families with children in the preschool age period would be beneficial for empowering family life. In addition, the implications of this study are also crucial to family counseling. When family counselors work with parents and encourage them to identify and utilize social support sources, this intervention may reduce family stress (Perez & Rubio, 2023) and improve family harmony.

Although this study contributes to the existing literature by explaining the relationships among parental competence, family harmony, parental stress, and perceived available support, it is important to note that it has some

limitations. First, the research design of this study was cross-sectional. Conducting experimental research to establish causality, and carrying out longitudinal studies to follow time-based variation in future research will aid in gaining a deeper understanding of research variables. Second, although the scale's validity and reliability assessments were conducted with mothers who had children aged 3-6, the scale can also be used to assess fathers' parental competence. Psychometric features of the scale for fathers with children aged 3-6 can be examined in future studies. Finally, although the role of social support as a mediator was examined in the study, the participants were not asked about their most significant sources of social support in family matters or whether they received support from these people regarding their parental roles and responsibilities. Collecting such data in future studies will contribute to understanding the dynamics of perceived available support regarding parental competence and family harmony.

Ethic

We declare that the research was conducted in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all participants included in the study.

Author Contributions

Both authors equally contributed to the article.

Conflict of Interest

There is no conflict of interest in the study.

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