



Examining needs of informal kinship families: Validating the family needs scale[☆]



Eunju Lee^{*}, Mi Jin Choi, Michael Clarkson-Henderix

Center for Human Services Research, School of Social Welfare, University at Albany 135 Western Ave. Albany, NY 12222, United States.

ARTICLE INFO

Article history:

Received 31 August 2015

Received in revised form 22 January 2016

Accepted 23 January 2016

Available online 25 January 2016

ABSTRACT

Families who provide informal kinship care are a critical part of child welfare, yet our understanding of their needs is limited due to the challenges of identifying the population. The absence of validated and reliable instruments for kinship families is an additional barrier. This study tests the psychometric properties and construct validity of the Family Needs Scale. A sample of 303 informal kinship families recruited through local child welfare and social services completed the scale as part of a demonstration project. An eight-factor structure emerged from psychometric testing. The FNS is strongly associated with other predictors of the needs such as income and parenting stress, suggesting the instrument's potential as a need assessment tool for kinship families. Further replication and robust analyses of the FNS structure will build stronger support for the scale as a needs assessment for kinship families.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Kinship care is defined as full-time care of children by grandparents, relatives or close family friends without a parent present in the home (CWIG, 2010). The number of children living in kinship care has increased 18% over the past decade (AECF, 2012). Currently 2.3 million children are living without parents, representing 3% of all children in the U.S. (U.S. DHHS, 2014). The vast majority of these children are in informal¹ kinship care (AECF, 2012; US DHHS, 2014) in which parents and caregivers arrange out of home care, either voluntarily through child welfare services or privately between themselves (CWIG, 2010). The reasons why children are living with kin other than their parents are complex (Gleeson et al., 2009), but diversion from custody by the state or local child welfare authority is a significant factor (Gleeson et al., 2009; Wallace & Lee, 2013).

Kinship families, regardless of type, are more socially and economically disadvantaged than non-kin foster families or biological families (Bundy-Fazioli & Law, 2005; Baker & Mutchler, 2010; Cardosa, Gomez, & Padilla, 2009; Harris & Skyles, 2008). A significant number of kinship caregivers demonstrate financial needs, employment challenges, and

have limited education (Barth, Guo, Green, & McCrae, 2007; AECF, 2012; Bavier, 2011; Littlewood, Strozier, & Whittington, 2014). Approximately 38% of all kinship families live under the federal poverty line (AECF, 2012). Kinship households headed by grandmothers are particularly vulnerable; 48% of children living in grandmother-only households live in poverty (USDC ESA, 2014). Kinship caregivers are more likely to be older than their non-kinship counterparts (AECF, 2012; Bavier, 2011), as most of them are grandparents. Many grandparent caregivers have their own medical and behavioral health needs and are frequently ill-equipped to manage the behavioral needs of kinship children, who have experienced the trauma of separation and/or maltreatment (Billing, Ehrle, & Kortenkamp, 2002; Ehrle & Geen, 2002; Harnett, Dawe, & Russell, 2014; Littlewood et al., 2014) and have unmet mental health needs (Smithgall, Yang, & Weiner, 2013).

The vulnerability of kinship families presents a pressing issue for social work practice and offers compelling reasons to understand their needs and to improve the well-being of children and caregivers. However, addressing this issue has remained a challenge, especially for those in informal kin care. Many children in informal kinship care are not likely to be present in official child welfare databases (Bavier, 2011; Whitley, Kelley, Williams, & Mabry, 2007) since they tend to fall between child and public welfare systems (Gibbs, Kasten, Bir, Duncan, & Hoover, 2006). Consequently, informal kinship care has received limited attention (Cuddeback, 2004; Kietzman, Scharlach, & Dal Santo, 2004; Gleeson et al., 2009). In addition to the limitation of data, no systematic, consistent policy and practice guidelines exist to serve this kinship population. Consequently, informal kinship caregivers are often unaware of their options for services and assistance (Cox, 2009) and have low utilization of services (Bavier, 2011) even though they are eligible for financial assistance and other services (AECF, 2012).

[☆] This study is funded by a demonstration grant awarded by the Children's Bureau to the NYS Kinship Navigator program (Grant Number: HHS-2012-ACF-ACYF-CF-0510, 90CF0050).

^{*} Corresponding author at: RI 207 135 Western Ave. Albany, NY 12222, United States. E-mail address: elee@albany.edu (E. Lee).

¹ The definition of "informal" is still being debated and its use varies by jurisdiction and by researchers (CWIG, 2010; Bavier, 2011; AECF, 2012). In this study, we are using "informal" to include any kinship families providing out of home care outside the formal foster care system. Kin caregivers may have court-ordered custody, direct custody ('voluntary' placement arranged by child welfare services) or privately arranged guardianship.

As part of the efforts to improve the well-being of children and caregivers in kinship care, the Children's Bureau funded several Kinship Navigator demonstration projects in 2012. One of the bureau's requirements was to examine their target population's service needs using the Family Needs Scale (FNS; [Dunst, Cooper, Weeldreyer, Snyder, & Chase, 1988](#)). The funding agency adopted this common measure to allow shared findings on kinship family needs and to provide comparable data for a cross-site evaluation.

The FNS was developed to measure the needs of parents of preschool- and elementary-aged children with disabilities or delays and children at risk for poor developmental outcomes. However, the instrument had not yet been rigorously examined as a measure for kinship family needs. We felt that the demonstration project offered a good opportunity to examine the fit and applicability of the FNS for kinship populations. This study, based on one such demonstration project, uses a community-based sample of informal kin caregivers to explore the psychometric and predictive qualities of the FNS and make recommendations on its applicability to practice with this population.

2. Prior research on the family needs scale

The Family Needs Scale is a 41 item self-report instrument developed to measure a range of needs identified by caregivers ([Dunst et al., 1988](#)). Each item is evaluated using a 5-point rating scale, ranging from 1 ("Almost Never") to 5 ("Almost Always") with the additional choice of "Not Applicable," which indicates no need. Initially nine factors (accounting for 79% of the variance) were identified, based on a sample

of 54 families of children with disabilities or at risk of poor developmental outcomes ([Dunst et al., 1988](#)). A factor loading of .40 or greater was used as a cutoff for item inclusion in their final instrument. The developers currently encourage the use of a total score and five subscales ([Table 1](#)), but it is unclear how the five sub-scales were extracted and validated.

It is hard to determine how widely the FNS is used in practice or in clinical settings, and research based on or testing it is limited. To our knowledge, only two studies have tested the FNS's psychometric properties since its initial development. [Hanley, Tasse, Aman, and Pace \(2003\)](#) examined FNS applications for 204 low income families with young children recruited from local Head Start programs. Using principal component extraction and a varimax rotation, 41 items were loaded in a seven-factor solution, which accounted for 70% of the variance. These factors were as follows: Primary Needs/Resource (44%); Education and Leisure (9%); Employment and Finances (5%); Transportation (4%); Future Planning for Child (3%); Budgeting (3%); and Social Support and Friendship (3%). The results showed a high internal consistency ($\alpha = .77$ to $.96$), and split-half reliability ($r = .93$), yet interrater correlations between parents were lower and ranged from modest ($r = .24$) to low-moderate ($r = .50$). While the study's sample is different from that of the developer's ([Dunst et al., 1988](#)), its factor structural findings are robust as the method of extraction, and rotation yielded similar findings with a larger sample of a different population. Despite concerns over low interrater reliabilities, the authors note the scale seems to be "a useful framework for studying family needs" (p. 47).

Table 1
Family Needs Scale with the suggested five subscales ([Dunst et al., 1988](#)).

Scale items	Basic resources	Specialized care	Growth & support	Financial	Future concerns
1. Having money to buy necessities and pay bills				*	
2. Budgeting money				*	
3. Paying for special needs of my child				*	
4. Saving money for the future			x		
5. Having clean water to drink	x				
6. Having food for two meals a day	x				
7. Having time to cook healthy meals for my family	x				
8. Feeding my child	x				
9. Getting a place to live	x				
10. Having plumbing, lighting, heat	x				
11. Getting furniture, clothes, toys	x				
12. Completing chores, repairs, improvements	x				
13. Adapting my house for my child		*			
14. Getting a job	x				
15. Having a satisfying job	x				
16. Planning for future job for my child					x
17. Getting where I need to go	x				
18. Getting in touch with people I need to talk to	x				
19. Transporting my child	x				
20. Having special travel equipment for my child		*			
21. Finding someone to talk to about my child		*			
22. Having someone to talk to			x		
23. Having medical and dental care for my family				*	
24. Having time to take care of myself			x		
25. Having emergency health care	x				
26. Finding dental & medical care for my child		*			
27. Planning for future health needs				*	
28. Managing the daily needs of my child at home				*	
29. Caring for my child during working hours	x				
30. Having emergency child care		*			
31. Getting respite care for my child		*			
32. Finding care for my child in the future					x
33. Finding a school placement for my child					x
34. Getting equipment or therapy for my child		*			
35. Having time to take my child to appointments	x				
36. Exploring future educational options for my child					x
37. Expanding my education, skills, and interests			x		
38. Doing things I enjoy			x		
39. Doing things with my family			x		
40. Participating in parent groups or clubs			x		
41. Traveling/vacationing with my child			x		

The second study (Bilgin, Coban, & Tanriverdi, 2013) translated the FNS from English to Turkish and back-translated it to ensure its consistency. The study's sample consists of 206 Turkish parents of disabled or developmentally delayed preschool and elementary aged children. This sample is not only larger but also has similar characteristics to those of the sample involved in developing the instrument. High internal consistency ($\alpha = .95$) and test-retest reliability ($r = .91$) indicate the dependability and stability of the FNS. Like Hanley et al. (2003), the authors implemented principal components analysis and varimax rotation. Similar to the original factor structure (Dunst et al., 1988), a nine-factor solution that explained 76% of the variance was extracted: Primary Needs (43%); Future Planning for Child (10%); Specialized Child Care (5%); Transportation (4%); Rest Needs (3%); Financial Resources (3%); Employment (3%); Nutrition of Child (3%); and Budgeting (2%).

Comparing the common factors across the three studies is challenging due to the absence of factorial item identifications (Bilgin et al., 2013) and factor item loadings (Dunst et al., 1988). However, it appears that the largest percentages of the explained variances across samples are attributed to a form of basic or primary needs. In addition, most of the original items for the Basic Resources factor correspond with Primary Needs factor items in one of the two aforementioned studies (Hanley et al., 2003).

While evidence is limited, the results from these studies support the FNS's internal consistency and provide some evidence of its stability. In addition, some common factors have emerged from two samples that shared characteristics (i.e. young low income families) but distinct issues (i.e. disability). However, these studies are not sufficient to ensure the applicability and adaptability of the FNS to kinship families for several reasons. First, kinship families are diverse in race and ethnicity, age and socio-economic status. Second, children in kinship care reside with non-parental caregivers who are not the biological parents for whom the FNS was initially intended. Finally, only through proper testing can we be assured of the instrument's fit for kinship populations.

3. Methods

3.1. Study setting and participant recruitment

This study was part of the evaluation of a Kinship Navigator demonstration project to improve the well-being of children and caregivers in informal kinship care in five pilot counties located in a northeastern state. For the project's purpose, we defined informal kinship care as full time care by grandparents or other kin caregivers who are not licensed foster care providers. Many children in informal kinship care were expected to be involved in the child welfare system although the extent was unknown.

To recruit eligible families, public child welfare and temporary assistance workers as well as community agency workers were asked to use a simple one-page form to identify kin caregivers with whom they came into contact. To be eligible, a kin caregiver; 1) had at least one child in her/his care, 2) provided care in the caregiver's home without parents present, and 3) was not a certified kin foster parent. If the criteria were met, a worker asked the caregiver's permission to be contacted by a researcher and also by a kin care program staff. Once the worker transmitted the form, research staff contacted a prospective participant by telephone and asked for informed consent through protocols approved by the University's Institutional Review Board. Due to the ongoing nature of study enrollment, data collection lasted 16 months, beginning May, 2013 and ending September, 2014.

3.2. Sample characteristics

The study participants consist of 303 kinship families who had at least one kinship child at the time of the study. Table 2 provides the characteristics of the sample. More than nine out of ten caregivers identified as female. While the majority of the caregivers (63.0%) were

Table 2
Sample characteristics (N = 303).

Variable	%	n
Female caregiver	92.4	280
Caregiver race/ethnicity		
White (non-Hispanic)	67.0	203
Black (non-Hispanic)	22.4	68
Hispanic	9.2	28
Other ^a	1.0	3
County		
E	33.3	101
C & D	39.3	119
A & B	27.1	82
Caregiver relationship to child		
Grandparent ^b	63.0	191
Other	37.0	112
Income		
Under \$ 20,000	33.7	102
\$20,000–\$49,999	33.3	101
\$50,000 and over	28.7	87
Children's disability (N = 454) ^c		
Mental disability	17.18	78
Physical disability	8.59	39
Learning disability	28.41	129
Variable	M	SD
Child's age ^d	7.73	5.21
Caregiver's age	51.76	11.48
Number of household members ^e	4.02	1.70
Parental distress ^{e,f}	30.05	7.88

^a The "other" category in this sample includes caregivers of Asian, American Indian or Alaska Native, or Native Hawaiian or other Pacific Islander.

^b If caregiver is taking care of at least one grandchild, the relationship is coded as grandparent.

^c Based on N of all kinship children.

^d For kinship families with multiple children, characteristics are provided for the youngest.

^e It includes kinship children and caregiver.

^f Score calculated as the sum of Parental Distress subscale ranging from 12 (i.e., strongly disagree on all subscale items) to 60 (i.e., strongly agree on all 12 items).

grandparents, a significant minority were other relatives and friends. The sample was racially diverse: 22.4% of the caregivers identified as Black; 9.2% identified as Hispanic. In addition to the primary kin caregivers, other household members, most likely the spouse of the caregiver, were present in the household but not the kinship children's biological parents. The household income was categorized into three groups. Approximately one third had a household income under \$20,000, another third was between \$20,000 and \$49,999, while the rest were \$50,000 or above. However, considering the average household size was four individuals, more than two-thirds of the families were poor or financially strained according to the 2015 government poverty guidelines. A single family in our sample was taking care of six kinship children, but most families had one (66.3%) or two children in their care (21.1%). The age of children ranged from zero to eighteen years old.

3.3. Measures

3.3.1. FNS

To measure caregiver's perceived needs for resources and support, the study used the 41-item Family Needs Scale. This copyrighted instrument is publicly available, but no specific guidance is available on norms, total scores or the five subscales. We included all 41 items in the study and followed the developers' rating system. Following the example of a previous study (Hanley et al., 2003), we treated NA responses as having no need.

3.3.2. Parental distress

The study included the Parenting Stress Index short form (PSI-SF) (Abidin, 1995) as a measure of caregiver strain. Research indicates a

strong linkage between stress and caregivers' resources and support (Kelley, Whitley, Sipe, & Yorker, 2000; Bundy-Fazioli, Fruhauf, & Miller, 2013; Dunne & Kettler, 2008; Heflinger & Taylor-Richardson, 2004; Lin, 2014; Linsk et al., 2009). The PSI-SF consists of three sub scales: Parental Distress (PD), Parent–Child Dysfunctional Interaction (P-CD), and Difficult Child (DC). Given our interests in parenting stress associated with unmet needs, we used only PD to avoid multicollinearity and to stay focused on stress. The PD subscale has 12 items that assess the extent to which caregivers have difficulties with implementing their parenting roles. Each item is rated on a five-point scale with response options ranging from 1 = strongly disagree to 5 = strongly agree. The PD demonstrates adequate internal consistency with an alpha coefficient of .87 (Abidin, 1995). The PD scale was used as a continuous variable in the analysis.

3.3.3. Socio-demographic variables

The number of household members was included because it directly relates to family necessities (Brannan, Manteuffel, Holden, & Heflinger, 2006; Cox, 2009; Hanley et al., 2003). This measure is a count of the number of individuals who lived in the household, including kinship children. As an indicator of family resources, we also included the family's household income. Caregivers reported their household income by selecting one of several income brackets, and we recoded them into three groups: Under \$20,000, \$20,000–\$49,999, and over \$50,000. In our analysis, household income was included using dummy variables with household income of \$50,000 and over as the reference category.

Additional demographic variables included the child's age, the caregiver's age, and the caregiver's race. Ages were calculated by dividing the difference between the survey completion and birth dates into 365-day increments. If a child's exact month and day of the birth was unknown to the caregivers, we selected the midpoint of the year. If a household had multiple children, we used the age of the youngest child. Race and ethnicity were coded as non-Hispanic white, non-Hispanic black, Hispanic, and other. For a few cases with multiple ethnic and race entries, anyone who selected Hispanic was recoded as Hispanic. For analysis, we combined white and other as reference group, since there were only a very few Asians or Native Americans.

3.4. Missing data

Overall, the response to survey questions was fairly consistent and complete. Missing data for each of the 41 FNS items were small. The amount of missing items ranges from 3.6 to 5.2%. We concluded that the missing values were random and we then proceeded with a single regression-based imputation method for imputing missing values (Allison, 2002). No substitution was made for missing values of other predictor variables. For example, we have 12 caregivers who did not respond to the income question (3.9%). We used listwise deletion for income and other variables in the regression analysis.

3.5. Analytical approach

The examination of the FNS involved two analytical steps. First, we completed a principal component analysis (PCA) of the FNS based on our sample of informal caregivers. We used the Statistical Package for the Social Sciences (SPSS, version 21) to perform the PCA and employed varimax rotation with Kaiser Normalization.

Next, we examined the psychometric properties of the FNS in relation to needs of kinship families. We used Cronbach's alpha coefficient to assess the internal consistency of the items that comprise the FNS and its subscales. We assessed face validity by reviewing the items associated with each subscale along with its factor. The correlation among the factors of the FNS determined multi-dimensional structure of the scale. Pair-wise correlations less than .85 suggest significant differentiation between factors (Kaiser, 1960).

Multiple ordinary least squares regressions tested the construct validity of FNS. Specifically, we examined whether parental distress, economic, and demographic variables related to the scale in expected ways. We entered all predictor variables simultaneously to estimate the unique contribution of each to the explanation of the FNS scores.

4. Results

4.1. Step 1: Principal Component Analysis (PCA)

Our first step to conduct the PCA had two aims: 1) to understand how the 41 items of FNS are related to each other with a sample of kinship caregivers; and 2) to examine the factor structure generated by our data and compare the factor structure to the developers and other studies. Based on the Kaiser–Meyer–Olkin's (KMO) sampling adequacy test and Bartlett's Test of Sphericity (Tabachnick & Fidell, 2001), we determined that the sample size was large enough to proceed with the factor analysis (KMO = 0.914 > 0.60, Bartlett's Test: $\chi^2 = 6770.903(820)$, $p < 0.000$).

4.1.1. Initial nine-factor solution

Principal component analysis with varimax rotation was conducted. A factor was selected if its eigenvalue was greater than one (Kaiser, 1960; O'Rourke, Hatcher, & Stepanski, 2005) which resulted in an initial extraction of a nine-factor solution (Table 3). This revised factor model explained 64.29% of variance. This initial factor structure was similar to the one observed by the scale developers (Dunst et al., 1988) as well as the structure developed in one of the studies we reviewed (Bilgin et al., 2013).

4.1.2. Criteria for determining numbers of factors

Based on the guidelines and criteria from the scale developers and the literature; we used the following statistical criteria for identifying the constructs and the items that were fit for them (Kaiser, 1960; O'Rourke et al., 2005; Tabachnick & Fidell, 2001; Dunst et al., 1988): (1) Factor loading greater than 0.4; (2) An average corrected item-to-total correlation greater than 0.35; and (3) An average inter-item correlation greater than 0.2. All the factors this extraction identified satisfied these criteria.

4.2. Step 2: Psychometric testing of the FNS

4.2.1. Face validity & internal consistency

Based on the results from the PCA, the FNS model with nine factors was examined for content and stability. The literature recommends that each factor (subscale) needs to have a reliability coefficient greater than 0.6 to be acceptable (Moss et al., 1998; Nagpal, Kumar, Kakar, & Bhartia, 2010). Eight of nine subscales demonstrated an accepted level of reliability for internal consistency ($\alpha > 0.6$, Table 4). However, the ninth factor showed a Cronbach's alpha of only 0.42. Considering the similarity of the items and a factor correlation between the ninth and other factors, items in the ninth factor were included into the third factor. This merged factor consisting of the third and ninth factors showed satisfactory reliability at 0.80. In addition, each item within each factor showed adequate interpretability to the construct's factor dimensions (O'Rourke et al., 2005). For example, "Finding dental and medical care for my child," "Having medical and dental care for my family," "Having emergency health care," and "Planning for future health needs" were clustered in the same factor under the need for "Health and Medical Care." In addition, we examined inter-correlation among eight factors (see Table 5) to test the factor structure's multi-dimensionality. A high correlation would indicate an overlap among different factors and should be a concern. Our test demonstrates that pair-wise correlations between subscales were moderate, indicating that each factor was measuring a distinct area of needs among kinship families. Based upon

Table 3Nine-factor initial model from Principle Component Analysis^a (41 items).

	Component								
	1	2	3	4	5	6	7	8	9
5. Having clean water to drink	0.771		0.114	0.123		0.205		0.218	
8. Feeding my child	0.735		0.164	0.253	0.256			0.147	
6. Having food for two meals a day	0.689			0.198	0.172	0.204	0.192		
7. Having time to cook healthy meals for my family	0.614	0.18	0.26	0.217	0.221			0.231	
10. Having plumbing, lighting, heat	0.599	0.115	0.173		0.186	0.196	0.12		0.134
13. Adapting my house for my child	0.591	0.215	0.327	0.152					0.342
19. Transporting my child	0.59	0.37	0.181	0.248	-0.113	0.205	0.131	-0.179	0.24
17. Getting where I need to go	0.573	0.311		0.123		0.326	0.133	-0.286	0.18
11. Getting furniture, clothes, toys	0.557	0.207	-0.122	0.13			0.268		0.17
9. Getting a place to live	0.513	0.245		0.203	0.176	0.247			0.221
12. Completing chores, repairs, improvements	0.482	0.209	0.159		0.244	-0.188	0.295	0.18	0.193
35. Having time to take my child to appointments	0.474	0.339	0.44	0.268				0.225	0.138
28. Managing the daily needs of my child at home	0.444	0.391	0.437	0.236	0.16		0.116	0.204	
41. Traveling/vacationing with my child	0.193	0.717	0.162	0.111			0.237		
38. Doing things I enjoy	0.198	0.662	0.276		0.183	0.153	0.132	0.147	
39. Doing things with my family	0.34	0.662	0.222	0.23	0.102			0.124	
37. Expanding my education, skills, and interests		0.617	0.102		0.151	0.195	0.238	0.246	0.214
40. Participating in parent groups or clubs	0.129	0.507	0.22	0.179	0.315	0.287			
24. Having time to take care of myself	0.155	0.466	0.306	0.13	0.403		0.154		-0.219
32. Finding care for my child in the future		0.155	0.79	0.115		0.133	0.138		
30. Having emergency child care	0.167	0.273	0.731	0.181	0.123			-0.115	0.145
31. Getting respite care for my child		0.122	0.676		0.136		0.172	-0.187	0.267
29. Caring for my child during working hours	0.147	0.257	0.633	0.115			-0.115	0.153	
33. Finding a school placement for my child	0.22		0.525	0.219		0.12		0.308	
26. Finding dental & medical care for my child	0.289	0.109	0.14	0.788					
23. Having medical and dental care for my family	0.178		0.116	0.767	0.103	0.116			0.102
25. Having emergency health care	0.198	0.257	0.175	0.707	0.184	0.116			
27. Planning for future health needs	0.216	0.273	0.301	0.604	0.242		0.183	0.145	
21. Finding someone to talk to about my child	0.105		0.118	0.201	0.783	0.179			0.16
22. Having someone to talk to	0.298	0.182		0.139	0.766	0.185	0.1		
18. Getting in touch with people I need to talk to	0.454	0.169		0.217	0.531		0.131		
14. Getting a job	0.136	0.12		0.105	0.172	0.836			
15. Having a satisfying job	0.196	0.17	0.163		0.132	0.769		0.131	
1. Having money to buy necessities and pay bills	0.267			0.135			0.725	-0.103	
4. Saving money for the future		0.163	0.197		0.111		0.652	0.109	
3. Paying for special needs of my child	0.123	0.188		0.226			0.529	0.22	0.406
2. Budgeting money	0.319	0.262	0.164	0.217			0.4	0.102	
16. Planning for future job for my child	0.36	0.218				0.173	0.108	0.643	
36. Exploring future educational options for my child		0.496	0.159	0.205			0.102	0.576	0.102
20. Having special travel equipment for my child	0.32		0.247				-0.11		0.673
34. Getting equipment or therapy for my child			0.216	0.405	0.149	0.18	0.119	0.253	0.526

Extraction method: Principal Component Analysis. Rotation method: Varimax with Kaiser Normalization.

^a Rotation converged in 11 iterations.

these analyses, the eight-factor model FNS was determined to be a suitable fit for this sample.

4.2.2. Construct validity

Construct validity examined whether the scale was operationalized to measure the concept of interest. It is tested by examining the scale's

Table 4Reliability of nine-factor model/eight-factor model.^a

	Nine factor model	Eight factor model ^a
Factor 1	0.915	0.915
Factor 2	0.841	0.841
Factor 3	0.809	0.802
Factor 4	0.85	0.85
Factor 5	0.799	0.799
Factor 6	0.812	0.812
Factor 7	0.616	0.616
Factor 8	0.624	0.624
Factor 9	0.422	–

^a Factor 9 was included into Factor 3.

relationship with other variables that are considered predictive (Messick, 1995; Vogt, 2005). In order to examine construct validity, we ran regression analyses with two primary predictors that bear relationships to family needs. First was the household income. Our expectation was that families with household income below than \$50,000 had higher needs than those with \$50,000 or more. The second external correlate was Parental Distress (PD), a subscale of PSI-SF. Demographic predictors including child's age, caregiver's age, and number of household members were used as covariates.

Results from our final step indicated that the total scale and all eight subscales of the FNS were significantly associated with the primary predictors in expected directions (Table 6). A kinship family's reported household income was a robust predictor for the Total Needs Scale as well as for three subscales. As compared to those with a household income of \$50,000 or over, kinship families with a household income of less than \$50,000 reported significantly higher needs for basic resources, such as food and shelter ($p < .001$). Financial Needs were also significantly higher for those families with incomes under \$50,000 ($p < .05$). Caregivers with lower household incomes also reported increased needs for social support ($p < .05$).

Table 5
Discriminant validity based on correlation among eight subscales.

	Basic resources	Leisure and self care	Child Care	Health care	Social support	Employment	Financial	Future concerns
Basic resources	1							
Leisure and self care	.648**	1						
Child care	.589**	.575**	1					
Health care	.599**	.513**	.534**	1				
Social support	.569**	.519**	.407**	.494**	1			
Employment	.388**	.410**	.319**	.280**	.375**	1		
Financial	.517**	.512**	.358**	.415**	.367**	.228**	1	
Future concerns	.478**	.522**	.328**	.350**	.344**	.257**	.373**	1

** Correlation is significant at the 0.01 level (2-tailed).

Needs for child care decreased with the child's age ($p < .001$), while needs for the future plans increased with the child's age ($p < .001$). On the other hand, older caregivers reported lower needs in social support, financial, leisure, and employment needs ($p < .05$).

The most robust predictor for the scale was a caregiver's level of parental stress. Parental stress measured by Parental Distress were positively associated with Total Family Needs as well as with seven out of eight subscales ($p < 0.01$). Kin caregiver with elevated parenting stress had higher needs for securing basic resources and additional financial resources. Their level of parenting stress was also closely associated with the level of needs in many domains including social support, leisure, child care and concerns for the child's future. The results provided further support for the theoretical expectation of a relationship between parental stress and family needs.

5. Discussion and applications to social work

The utilization of the Family Needs Scale (FNS) in a Kinship Navigator Demonstration project presented a timely and critical opportunity to examine the factor structure and psychometric properties of FNS, a scale that has not been validated for the kinship population. This study's sample included 303 families where children were living with grandparents, other relatives, or family friends outside of the foster care system. The results from the current analyses are promising.

The initial extraction of the nine-factor structure indicated a good fit, explaining 64% of the variance; the results were consistent with those from previous studies and the scale developers. However, one factor showed low internal consistency and thus was merged with another factor that was tapping into a similar domain of needs. The final model was emerged with eight factors and the total score. The fit statistics of the final model were robust given the modest sample size. Each of the eight subscales demonstrated strong internal consistency and reliability. Furthermore, items within each subscale were consistent in meaning and suggested a natural grouping.

Testing of the final model's construct validity supported the FNS's adaptability to the kinship population. Its total and subscales were associated with primary predictors and demographic variables in expected directions: For example, family needs in child care and future concerns seemed to be corresponding with the child's developmental stage.

Kinship families with lower household incomes were more likely to indicate higher needs for basic resources as well as for social support. Interestingly, caregivers with a household income between \$20,000 and \$49,999 indicated elevated needs for employment as well as for future concerns while those with a household income under \$20,000 did not, perhaps reflecting challenges of the working poor.

Statistically significant relationships between parenting stress and family needs further affirmed the validity of the scale. Prior research found evidence for such relationships; lack of resources and social support and economic hardship were known to significantly affect

Table 6
Predictors of kinship family needs (N = 286).

Predictors	Total family needs ^a	Basic resources	Leisure & self care	Child care	Health care	Social support	Employment	Financial	Future concerns
<i>Demographic</i>									
Child's Age	-.002	-.009	.022	-.051***	.001	.011	-.001	.023	.067***
Caregiver's Age	-.012*	-.007	-.023**	-.003	-.007	-.017*	-.022**	-.015*	-.020*
Caregiver's race/ethnicity ^b									
Black	.321**	.331*	.538**	.241	.357	.103	.321	.223	.341
Hispanic	.428*	.349	.793**	.384	.720*	.299	.231	.479*	-.289
Caregiver's relationship to child									
Grandparent	-.183	-.233	.116	-.377**	-.479*	-.051	.006	-.079	-.073
N of household members	.017	.044	.024	-.030	.010	-.033	.019	.036	.048
County ^c									
A and B	-.225	-.150	-.276	-.082	-.235	-.309	-.227	-.472**	-.414
C and D	-.041	.052	-.115	.147	-.229	.082	.242	-.018	-.180
<i>Economic</i>									
Household Income ^d									
Under \$20,000	.270*	.549***	.077	-.030	.131	.375*	.292	.417*	-.099
\$20,000–\$49,999	.368**	.532***	.204	.024	.310	.571**	.491*	.508**	.410*
<i>Caregiver stress</i>									
Parental distress	.033***	.030***	.044***	.032***	.026**	.051***	.008	.033***	.034***

^a The total score is a sum of all items;

^b Reference category: White or Other.

^c Reference category: County E.

^d Reference category: Over \$50,000.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

parenting stress (Kelley et al., 2000; McConnell, Breitreuz, & Savage, 2011; Ostberg & Hagekull, 2000).

Black caregivers reported higher needs in basic resources and leisure and self-care than white caregivers. This result is in line with current knowledge on black grandmothers raising their grandchildren (Darling & Gallagher, 2004) and also raises a concern for the well-being of the black children who are disproportionately more likely to be cared for by kin caregivers (AECF, 2012).

Access to health care is an important area of need given its association with income as well as with parenting outcomes (Cheng & Li, 2012; Nelson, Gibson, & Bauer, 2010; Swann & Sylvester, 2006; Yancura, 2013). Our result showing that grandparent caregivers reported lower health care needs than other relative caregivers may come as a surprise. However, we speculate that since the items for this subscale asked not about the caregiver's own health status but about the accessibility and utilization of health services, grandparents were more likely to be on government-sponsored health insurances such as Medicaid and Medicare than other relative caregivers who are younger and working. Hispanic caregivers' higher needs for health care is a reflection of the challenges they may face in accessing government sponsored health insurances and accessing health care services due to language barriers or immigrant status.

Empirical testing of an instrument is necessary, especially if the instrument was adopted for a population different from the intended one. However, the question of instrument validity also needs to be addressed through a theoretical lens by understanding the contexts of research and practice. The results from the present study provide evidence that the FNS could be a helpful needs assessment tool for kinship families. The areas of needs identified through testing are supported by the existing literature on kinship families. Many of these families are economically vulnerable and assume the responsibility of raising kinship children without the additional financial support available to foster parents (Lin, 2014; Nelson et al., 2010; Swann & Sylvester, 2006). The ease of scale administration and interpretation of the results add to its strengths as a potential tool for assessing the needs of kinship families.

While the validation and the identification of FNS are important contributions, some limitations need to be considered. First, the study is not based on a representative sample of kinship families. While a random sample was not feasible, the recruitment of the study participants specifically targeted those with child welfare and/or public assistance involvement. As a result, the sample was likely drawn from kinship families who were more connected to service systems and thus had greater needs. Thus, the instrument may be less sensitive to kinship families with fewer needs.

Second, our findings were based on a relatively small sample. Although statistical testing indicated our sample was adequate, the results should be interpreted with caution. We believe that the final model with eight factors and a total score is a best fit for our sample, but a larger sample may yield a different factor structure.

Additional analyses with larger samples and more diverse samples of kin caregivers are needed to speak to the generalizability of our findings. Further replication and robust analyses of the FNS's structure will build strong support for using the instrument to measure the needs of kinship families.

The study results warrant two important policy and practice implications. First, the FNS is a good assessment tool in social work practice with kinship families. Given the lack of any known reliable tools for assessing kinship family needs, the scale's application is promising. Its non-clinical nature allows any service provider to quickly evaluate their needs across many areas. While many kinship families have high needs for fundamental necessities like food and shelter, there are other important areas of need such as social support that warrant attention. In practice, a simple conversation between a service provider and caregiver using the FNS would lead them to identify these types of needs as well as others. Practitioners also need to keep in mind that

the stress of raising kin children is high for caregivers in need of resources. While the FNS does not measure the needs for mental health services, evidence suggests that children have unmet needs for such services (Smithgall et al., 2013).

Another implication is pertinent for child welfare administrators and policy makers. Results indicate significant unmet needs among kinship families who have been in contact with child welfare staff, as well as temporary assistance staff. Children in informal kinship care may have extensive service needs (Gibbs et al., 2006). Yet, unlike those in the formal foster care system, informal kinship families do not receive services and funding commensurate with the responsibilities they are asked to bear (Walsh, 2013; Yancura, 2013). Social service agencies should consider delegating additional resources to assist informal kin caregivers in accessing eligible services.

Acknowledgement

We would like to express our sincere gratitude to the caregivers for their participation and staff members for their assistance.

Appendix A. Descriptive table — FNS total and subscales

Descriptive statistics					
	N	Minimum	Maximum	Mean	Std. deviation
Basic resources	303	.00	5.00	1.3608	1.04778
Leisure and self care	303	.00	5.00	1.8377	1.22635
Child care	303	.00	4.43	1.1139	.98534
Health care	303	.00	5.00	1.5895	1.40275
Social support	303	.00	5.00	1.5066	1.23966
Employment	303	.00	5.00	.9002	1.29814
Financial	303	.00	5.00	2.3849	1.14619
Future concerns	303	.00	5.00	1.4497	1.36527
Total FNS	303	.00	4.39	1.5032	.87935

References

- Abidin, R. (1995). *Parenting Stress Index: Professional manual (third)*. Odessa, FL: Psychological Assessment Resources, Inc.
- Allison, P. D. (2002). *Missing data*. Thousand Oaks, CA: Sage Publications.
- Annie E. Casey Foundation (AECF) (2012). *Stepping up for kids: What government and communities should do to support kinship families*. Baltimore, MD: The Annie E. Casey Foundation Retrieved from <http://www.aecf.org/resources/stepping-up-for-kids/>
- Baker, L. A., & Mutchler, J. E. (2010). Poverty and material hardship in grandparent-headed households. *Journal of Marriage and Family*, 72(4), 947–962. <http://dx.doi.org/10.1111/j.1741-3737.2010.00741.x>
- Barth, R., Guo, S., Green, R., & McCrae, J. (2007). Kinship care and nonkinship foster care: Informing the new debate. In R. Haskins, F. H. Wulczyn, & M. Webb (Eds.), *Child protection: Using research to improve policy and practice*. Washington, DC: Brookings Institution.
- Bavier, R. (2011). Children residing with no parent present. *Children and Youth Services Review*, 33, 1891–1901.
- Bilgin, S., Coban, G. I., & Tanriverdi, D. (2013). Reliability and validity of the Family Needs Scale in a Turkish population. *Rehabilitation Nursing*, 38(5), 247–253.
- Billing, A., Ehrle, J., & Kortenkamp, K. (2002). Children cared for by relatives: What do we know about their well-being? *New federalism: National survey of America's families, Series B* (No. B-46).
- 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*, 33(2), 182–197 <http://doi.org/10.1007/s10488-006-0032-8>.
- Bundy-Fazioli, K., & Law, M. (2005). "I screamed for help": A case study of one grandmother's experience with voluntary kinship care. *Journal of Family Social Work*, 9(3), 1–18.
- Bundy-Fazioli, K., Fruhauf, C. A., & Miller, J. L. (2013). Grandparents caregivers' perceptions of emotional distress and well-being. *Journal of Family Social Work*, 16(5), 447–462 <http://doi.org/10.1080/10522158.2013.832461>.
- Cardosa, J., Gomez, R., & Padilla, Y. (2009). What happens when family resources are across international boundaries? An exploratory study on kinship placement in Mexican immigrant families. *Child Welfare*, 88(6), 67–84.
- Cheng, T., & Li, A. (2012). Maltreatment and families' receipt of services: Associations with reunification, kinship care, and adoption. *Families in Society: The Journal of Contemporary Social Services*, 93(3), 189–195.

- Child Welfare Information Gateway (CWIG) (2010). *Kinship caregivers and the child welfare system*. Washington, DC: Child Welfare Information Gateway Retrieved from https://www.childwelfare.gov/pubpdfs/f_kinshi.pdf
- Cox, C. B. (2009). Custodial grandparents: Policies affecting care. *Journal of Intergenerational Relationships*, 7(2–3), 177–190.
- Cuddeback, G. S. (2004). Kinship family foster care: A methodological and substantive synthesis of research. *Children & Youth Services Review*, 26(7), 623–639.
- Darling, S. M., & Gallagher, P. A. (2004). Needs of and support for African American and European American caregivers of young children with special needs in urban and rural settings. *Topics in Early Childhood Special Education*, 24(2), 98–110.
- Dunne, E. G., & Kettler, L. J. (2008). Grandparents raising grandchildren in Australia: exploring psychological health and grandparents' experience of providing kinship care. *International Journal of Social Welfare*, 17(4), 333–345 <http://doi.org/10.1111/j.1468-2397.2007.00529.x>.
- Dunst, C. J., Cooper, C. S., Weeldreyer, J. C., Snyder, K. D., & Chase, J. H. (1988). Family needs scale. In C. J. Dunst, C. Trivette, & A. Deal (Eds.), *Enabling and empowering families: Principle and guidelines for practice* (pp. 149–151). Cambridge, MA: Brookline Books (The scale is available through <http://www.wbpress.com>).
- Ehrle, J., & Geen, R. (2002). Children cared for by relatives. *What services do they need? New federalism: National survey of America's families, Series B* (No. B-47).
- Gibbs, D., Kasten, J., Bir, A., Duncan, D., & Hoover, S. (2006). Between two systems: Children in TANF child-only cases with relative caregivers. *Children and Youth Services Review*, 28, 435–446.
- Gleeson, J. P., Wesley, J. M., Ellis, R., Seryak, C., Talley, G. W., & Robinson, J. (2009). Becoming involved in raising a relative's child: Reasons, caregiver motivations and pathways to informal kinship care. *Child & Family Social Work*, 14(3), 300–310 <http://doi.org/10.1111/j.1365-2206.2008.00596.x>.
- Hanley, B., Tasse, M. J., Aman, M. G., & Pace, P. (2003). Psychometric properties and norms of the Family Needs Scale. *Journal of Child and Family Studies*, 12(1), 41–48.
- Harnett, P. H., Dawe, S., & Russell, M. (2014). An investigation of the needs of grandparents who are raising grandchildren. *Child & Family Social Work*, 19(4), 411–420. <http://dx.doi.org/10.1111/cfs.12036>.
- Harris, M. S., & Skyles, A. (2008). Kinship care for African American children: Disproportionate and disadvantageous. *Journal of Family Issues*, 29(8), 1013–1030 <http://doi.org/10.1177/0192513X08316543>.
- Heflinger, C. A., & Taylor-Richardson, K. D. (2004). Caregiver strain in families of children with serious emotional disturbance: Does relationship to child make a difference? *Journal of Family Social Work*, 8(1), 27–45 http://doi.org/10.1300/J039v08n01_02.
- Kaiser, H. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, 20, 141–151.
- Kelley, S. J., Whitley, D., Sipe, T. A., & Yorker, B. C. (2000). Psychological distress in grandmother kinship care providers: the role of resources, social support and physical health. *Child Abuse & Neglect*, 24(3), 311–321.
- Kietzman, K. G., Scharlach, A. E., & Dal Santo, T. S. (2004). Local needs assessment and planning efforts for family caregivers: findings and recommendations. *Journal of Gerontological Social Work*, 42(3/4), 39–60.
- Lin, C. (2014). Evaluating services for kinship care families: A systematic review. *Children and Youth Services Review*, 36, 32–41 <http://doi.org/10.1016/j.childyouth.2013.10.026>.
- Linsk, N., Mason, S., Fendrich, M., Bass, M., Prubhughate, P., & Brown, A. (2009). "No matter what I do they still want their family": Stressors for African American grandparents and other relatives. *Journal of Family Social Work*, 12(1), 25–43 <http://doi.org/10.1080/10522150802661547>.
- Littlewood, K. L., Strozier, A., & Whittington, D. (2014). Kin as Teachers: An early childhood education and support intervention for kinship families. *Children & Youth Services Review*, 381–389. <http://dx.doi.org/10.1016/j.childyouth.2013.11.026>.
- McConnell, D., Breitreuz, R., & Savage, A. (2011). From financial hardship to child difficulties: Main and moderating effects of perceived social support. *Child: Care, Health & Development*, 37(5), 679–691. <http://dx.doi.org/10.1111/j.1365-2214.2010.01185.x>.
- Messick, S. (1995). Validity of psychological assessment: Validation of inferences from persons' responses and performances as scientific inquiry into score meaning. *American Psychologist*, 50, 741–749. <http://dx.doi.org/10.1037/0003-066x.50.9.741>.
- Moss, S., Prosser, H., Costello, H., Simpson, N., Patel, P., Rowe, S., ... Hatton, C. (1998). Reliability and validity of the PAS-ADD checklist for detecting psychiatric disorders in adults with intellectual disability. *Journal of Intellectual Disability Research*, 42(2), 173–183.
- Nagpal, J., Kumar, A., Kakar, S., & Bhartia, A. (2010). The development of 'Quality of Life Instrument for Indian Diabetes Patients (QOLID)': A validation and reliability study in middle and higher income groups. *Journal of the Association of Physicians of India*, 58, 295–304.
- Nelson, J. G., Gibson, P. A., & Bauer, J. W. (2010). Kinship care and "child-only" welfare grants: Low participation despite potential benefits. *Journal of Family Social Work*, 13(1), 3–24 <http://doi.org/10.1080/10522150903437466>.
- O'Rourke, N., Hatcher, L., & Stepanski, E. J. (2005). *A Step-by-step approach to using SAS for univariate & multivariate statistics* (2nd ed.). Cary, NC: SAS Institute, Inc.
- Ostberg, M., & Hagekull, B. (2000). A structural modeling approach to the understanding of parenting stress. *Journal of Clinical Child Psychology*, 29, 615–625.
- Smithgall, C., Yang, D., & Weiner, D. (2013). Unmet mental health service needs in kinship care: The importance of assessing and supporting caregivers. *Journal of Family Social Work*, 16(5), 463–479 <http://doi.org/10.1080/10522158.2013.832460>.
- Swann, C. A., & Sylvester, M. S. (2006). Does the child welfare system serve the neediest kinship care families? *Children and Youth Services Review*, 28(10), 1213–1228 <http://doi.org/10.1016/j.childyouth.2005.11.007>.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate analysis* (4th ed.). Boston, MA: Allyn and Bacon.
- U.S. Department of Commerce, Economics and Statistics Administration (ESA) (2014n). *Coresident grandparents and their grandchildren: 2012* (Report No. P20-576). (Retrieved from <https://www.census.gov/content/dam/Census/library/publications/2014/demo/p20-576.pdf>).
- U.S. Department of Health and Human Services, Office of Human Services Policy, Office of the Assistant Secretary for Planning and Evaluation (ASPE) (2014m). *Children in nonparental care: Findings from the 2011–2012 national survey of children's health* (ASPE Research Brief) (Retrieved from http://aspe.hhs.gov/hsp/14/ChildrenNonparentalCare/rb_nonparentalcare.pdf).
- Vogt, W. P. (2005). *Dictionary of statistics & methodology* (3rd ed.). Thousand Oaks, CA: Sage Publication, Inc.
- Walsh, W. (2013). Informal kinship care most common out-of-home placement after an investigation of child maltreatment. *The Carsey Institute at the Scholars' Repository*. Paper 189 <http://scholars.unh.edu/carsey/189>.
- Wallace, G. W., & Lee, E. (2013). Diversion and kinship care: A collaborative approach between child welfare services and NYS's Kinship Navigator. *Journal of Family Social Work*, 16(5), 418–430. <http://dx.doi.org/10.1080/10522158.2013.834281>.
- Whitley, D. M., Kelley, S. J., Williams, C., & Mabry, D. (2007). *Grandparents raising grandchildren: A call to action: Administration for children and families, region IV*. Washington, DC: US Department of Health and Human Services.
- Yancura, L. A. (2013). Service use and unmet service needs in grandparents raising grandchildren. *Journal of Gerontological Social Work*, 56(6), 473–486 <http://doi.org/10.1080/01634372.2013.804471>.