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Measurement Article

Orientation to the Caregiver Role Among Latinas of Mexican Origin

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Abstract

Purpose of the Study: To develop the Caregiver Orientation Scale for Mexican-Origin Women and evaluate its psychometric properties.

Design and Methods: We developed a questionnaire to measure domains of cultural orientation to the caregiver role based on formative research and on the Cultural Justifications for Caregiving Scale. We conducted a series of exploratory factor analyses (EFAs) on data collected from 163 caregivers. We estimated internal consistency reliability (Cronbach's coefficient alpha) and assessed construct validity by estimating correlations between all latent factors and self-rated health, interview language, and weekly hours of care.

Results: EFAs suggested four factors representing familism, obligation, burden, and caregiving intensity that displayed good fit (χ^2 ($df = 63$) = 70.52, $p = .24$; RMSEA = .03 [90% CI: 0.00, 0.06]; comparative fit index = .99). Multi-item scales representing the four domains had coefficient alphas ranging from .68 to .86. Obligation was positively associated with burden (.46, $p < .001$) and intensity (.34, $p < .01$), which were themselves positively correlated (.63, $p < .001$). Familism was positively associated with obligation (.25, $p < .05$) yet negatively associated with burden (−.35, $p < .01$) and intensity (−.22, $p < .05$). Weekly hours of care were positively associated with burden (.26, $p < .01$) and intensity (.18, $p < .05$), whereas self-rated health and burden (−.21, $p < .05$) and Spanish language and intensity (−.31, $p < .001$) were negatively correlated.

Implications: The study shows that Mexican-origin caregiver orientation is multidimensional and that caregivers may have conflicting motivations for caregiving.

Keywords: Culture, Factor analysis, Informal caregiving, Latino/a (Mexican American)

Dilworth-Anderson, Williams, and Gibson's (2002) review of race, ethnicity, and culture in caregiving research indicated a gap in understanding the dynamics, dimensions, and outcomes of caregiving among Latinos. Dilworth-Anderson and colleagues (2005) also pointed out that more research is needed within racial/ethnic subgroups to enhance knowledge about the role of culture in caregiver behavior and health outcomes.

Empirical studies that have examined the cultural values associated with caregiving in Latino populations have focused on familism, a multidimensional construct that has been used to explain the structure and interrelations of Latino families. Familism involves reciprocity and sacrifice across a strong interdependent network of kin and non-kin individuals (Losada et al. 2006; Peñalosa, 1968;

Sabogal, Marín, Otero-Sabogal, Marín, & Perez-Stable, 1987; Shurgot & Knight, 2004). One of the hallmarks of familism is the priority of the family as a collective unit over individual needs; however, familism has long been criticized for perpetuating stereotypes about family care of elderly relatives (Wallace & Facio, 1987). Gelman (2014) found that beliefs about familism and its influence on elder caregiving were not consistent across caregivers' personal narratives. Findings from another recent study suggested that familism as an ideal was strong among Mexican-origin women caregivers although familism in practice was not; caregivers reported receiving no consistent or ongoing support from their family networks (Mendez-Luck, Applewhite, Lara & Toyokawa, 2016). Other research has found that mutuality, the positive quality of the caregiver-care receiver relationship, is a motivation for caregiving among Mexican Americans (Kao, Lynn, & Crist, 2013). Thus, the findings from these studies suggest that factors other than familism may motivate caregiving in Latino families.

Cultural beliefs about aging and social roles may be additional factors that shape caregiving behavior among Latinos (Knight & Sayegh, 2010). A study of Mexican American women caregivers found that caregiving was an integral part of being a good daughter, and the most rewarding aspect of caregiving was the ability to fulfill role obligations (Jolicoeur & Madden, 2002). Additionally, prior qualitative research with Mexican-origin caregivers identified culturally relevant meanings of caregiving highlighting the complexity of language and culture underlying constructs such as duty, obligation, intensity, and burden (Mendez-Luck & Anthony, 2015; Mendez-Luck, Kennedy & Wallace, 2008, 2009).

Changing demographics among Latinos in the United States may contribute to the complexity of these constructs. In 2014, Latinos aged 65 and older made up only 8% of the older population, but this percentage is expected to increase to 22% by 2060 (Administration on Aging, 2015). The number of foreign-born Mexican-origin Latinos in the United States has been slowly dropping, whereas the overall Mexican-origin Latino population has been experiencing growth due to high fertility rates, making the Mexican-origin Latino population one of the youngest ethnic minority subgroups in the United States (Lopez & Patton, 2015). Thus, future cohorts of Mexican-origin Latino older adults may encounter a different familial support system than previous generations due to the weakening of social support systems, a result of poor economic conditions, and more households that are headed by women who work outside of the home (Vega & Gonzalez, 2012).

To explore culture as a frame for caregiving among Latinos, we developed a scale assessing orientation to the caregiver role among Mexican-origin female caregivers. We focus on Mexican-origin caregivers because this Latino subgroup constitutes two thirds of all Latinos in the United States (Motel & Patten, 2012). The aims of this study are to

summarize the development of the Caregiver Orientation Scale for Mexican-Origin Women and evaluate its psychometric properties in a sample of Mexican-origin caregivers.

Design and Methods

Sampling Procedures

Study participants were community-dwelling caregivers living in East Los Angeles, California and in the Willamette Valley, western Oregon. Despite the geographic differences, both locations have high concentrations of Latino residents of Mexican origin, and similar rates of poverty and educational attainment among Latino residents (Larsen, 2013; U.S. Census Bureau, 2010). We recruited participants in three phases between 2006 and 2014. The inclusion criteria for participation were as follows: (a) 18 years or older; (b) female; (c) of Mexican descent; and (d) responsible for the day-to-day care of a dependent, elderly family relative—that is, related through blood or marriage, 60 years or older, and needing assistance with at least one basic activity of daily living (ADL; Katz, 1983) or instrumental activity of daily living (IADL; Lawton & Brody, 1969). We developed broad eligibility criteria because we were interested in examining a range of caregiving experiences that would contribute to a more comprehensive development of caregiving constructs. Thus, we did not restrict participation because of socioeconomic status, level of formal education, or acculturation level.

The first phase (2006–2007) consisted of qualitative interviews as formative research for scale development. The second phase (2008–2011) involved a survey on elder caregiving. The third phase (2013–2014) was the collection of data for another study that used the same survey on elder care as in Phase 2.

We used multiple strategies to identify and enroll participants into the study. We recruited caregivers with the help of community-based organizations and by face-to-face contact with community residents on street corners, at supermarkets, and at bus stops. We also used snowball or respondent-driven sampling to recruit participants (Bernard, 1995). This method has been shown to be effective for locating community-dwelling caregivers who may not access social or medical services (Rodriguez, Rodriguez, & Davis, 2006). Additional details on our recruitment efforts can be found elsewhere (Mendez-Luck et al., 2011). The screener response rate, the total number screened from all potential participants, was 76%, and 82% of screened and eligible caregivers completed a questionnaire.

Data Collection and Scale Development

We obtained informed consent from study participants using procedures approved by the University of California, Los Angeles and Oregon State University Institutional Review Boards. Thirty five female caregivers of Mexican origin living in East Los Angeles completed qualitative

interviews (18 in Spanish and 17 in English) that lasted an average of 75 minutes and received \$35 for their participation. Interviews took place in participants' homes or a location of their choice, such as a church or coffee shop. The data were collected through semistructured interviews using an interview guide adapted from prior research with Mexican caregivers (Mendez-Luck et al., 2008, 2009). The interview included open-ended questions on the emotional and physical difficulties associated with caregiving, scope and range of caregiving assistance, and cultural beliefs and values about the caregiver role. The interview data were analyzed for identification of caregiving constructs salient to Mexican-origin caregivers. These results are published elsewhere (Mendez-Luck, Applewhite, Lara, & Toyokawa, 2016; Mendez-Luck & Anthony, 2015).

We then conducted a literature review on the constructs identified from analyses of the interview data, and found Dilworth-Anderson's Cultural Justifications for Caregiving Scale (CJCS), which was developed to assess caregivers' cultural reasons and expectations associated with providing care to elderly relatives (Dilworth-Anderson, Goodwin, & Williams, 2004). The CJCS was designed to measure the degree to which African American caregivers identified with cultural norms, beliefs, and expectations of caregiving (Dilworth-Anderson et al., 2004). Thus, we developed a questionnaire to measure domains related to cultural orientation to the caregiver role using information gleaned from analyses of the interview data as well as the CJCS.

A questionnaire and screener form were written in English by C. A. Mendez-Luck and R. D. Hays, translated to Spanish by a native Spanish-speaking research assistant, and back-translated to English by a second native Spanish-speaking research assistant. The purpose of this process was to maximize semantic equivalence of the items in both languages. We conducted concurrent and retrospective cognitive interviewing with 14 Mexican-origin female caregivers (8 in Spanish and 6 in English) to identify and correct problems with the overall administration of the questionnaire and to pinpoint inconsistencies with the word choice and interpretation of individual items (Beatty & Willis, 2007). The instruments were revised based on the cognitive interviews, and the final instruments consisted of a four-item screener and a 137-item questionnaire. The screener included the introduction, "Sometimes the families and friends of the elderly help them with life's daily activities such as grocery shopping, cleaning, going to the doctor, companionship and more personal activities such as bathing and feeding. Are you currently providing help in this way to someone in your family who is 60 years old or older?" Women who answered "yes" were considered a caregiver and then asked about her relationship to the care receiver and her Latino ancestry. Caregivers were asked "What is your Latino or Hispanic ancestry or origin?" Those who answered "Mexican/Mexicano", "Mexican American," or "Chicano" were considered being of Mexican origin. The questionnaire primarily focused on the length and scope

of care, forms of support, caregiving intensity, Mexican heritage, and cultural reasons or motivations for caregiving. The questionnaire also collected standard demographic information, such as age, marital status, and educational attainment.

The questionnaire was self-administered by 163 caregivers (107 in Spanish and 56 in English) in the conference rooms of local community-based social services organizations. Participants chose in which language to complete the questionnaire, and those who completed a questionnaire received \$25 for their participation.

Questionnaire

Cultural Justifications for Caregiving Scale

The original CJCS consists of 10 items assessing caregivers' cultural reasons and expectations associated with providing care to elderly relatives (Dilworth-Anderson et al., 2005). Each CJCS question has four response categories: 1 (*strongly disagree*), 2 (*somewhat disagree*), 3 (*somewhat agree*), and 4 (*strongly agree*). Our qualitative interviews with caregivers identified additional caregiving constructs not represented in the CJCS. Thus we developed 17 new items to augment the CJCS. Table 1 contains the newly constructed items and those from the original CJCS.

Self-rated Health

Caregivers were asked "would you say that in general your health is excellent, very good, good, fair or poor?" using the standard categorical response scale, from 1 (*poor*) to 5 (*excellent*; Hays, Spritzer, Thompson, & Cella, 2015).

Survey Language (Spanish)

Caregivers were given the option of completing the survey in English or Spanish. Language was assessed by the version of questionnaire completed, English or Spanish. This variable was recorded as 1 for surveys completed in Spanish and 0 for those completed in English.

Weekly Hours of Care

Caregivers were asked "In a typical week, about how many hours do you spend helping your relative?" We used a categorical response scale of 1 = *less than 1 hour*, 2 = *1–4 hours*, 3 = *5–9 hours*, 4 = *10–14 hours*, 5 = *15–19 hours*, or 6 = *20 or more hours*.

Statistical Procedures

We assessed the dimensionality of Dilworth-Anderson's CJCS (2004) in our sample of Mexican-origin caregivers and evaluated whether the newly developed questions provided unique information about cultural orientation to caregiving. We conducted a series of exploratory factor analyses (EFAs). These EFAs used maximum likelihood estimation in MPlus and geomin (oblique) rotation. The percent of missing data was low (1%), and we imputed

Table 1. CJCS and New Items Developed From Qualitative Interviews**CJCS items**

The next set of questions asks you about reasons that may explain why you take care of your relative. Read each statement and ask yourself how much you agree or disagree with the statement.

I give care because

1. It is my duty to provide care to elderly dependent family members
2. It is important to set an example for the children in the family
3. I was taught by my parents to take care of elderly dependent family members
4. Of my religious and spiritual beliefs
5. By giving care to elderly dependent family members, I am giving back what has been given to me
6. It strengthens the bonds between me and them
7. I was raised to believe care should be provided in the family
8. It was what my people have always done
9. I feel as though I am being useful and making a family contribution
10. My family expects me to provide care

New items

The next set of questions are more reasons that may explain why you take care of your relative. Read each statement and ask yourself how much you agree or disagree with the statement.

11. It is my obligation to take care of my relative
12. I am a caregiver by choice
13. It is my pleasure to take care of my relative
14. I take care of my relative because if I didn't, nobody else would
15. It is my responsibility as a wife, daughter, or sister to take care of my relative
16. I take care of my relative because it's part of the Mexican tradition
17. Caregiving means having a cross to bear
18. Being a caregiver is a burden to me
19. Caregiving gives me satisfaction
20. The most important part of caregiving is taking care of my relative's emotional needs
21. The most important part of caregiving is taking care of my relative's physical needs
22. Being a caregiver is hard on my body
23. Being a caregiver is hard on my mind
24. I take care of my relative to keep her/him from feeling alone or abandoned
25. For me, taking care of my relative is way of giving love
26. Keeping my relative company is a form of giving care
27. I wouldn't send my relative to a nursing home because it would mean that I abandoned him/her

Notes: CJCS = Cultural Justifications for Caregiving Scale.

Each question had four response categories of 1 (*strongly disagree*), 2 (*somewhat disagree*), 3 (*somewhat agree*), and 4 (*strongly agree*).

missing data using a single Markov Chain Monte Carlo imputation that included all analyzed variables in the imputation model.

The scree test (Cattell, 1966; see also Osborn, 2014) and Kaiser–Guttman rule (Guttman, 1940; Kaiser, 1960, 1991; see also Osborn, 2014) indicated the range of solutions to examine. Model fit, simple structure, and interpretability were then considered for models within that range. For each analysis, the final solution therefore represented the most parsimonious model (determined according to construct interpretability and simple structure) that met the criteria for minimally acceptable fit (root mean square error of approximation [RMSEA] $\leq .08$, comparative fit index [CFI] and Tucker–Lewis index [TLI] $\geq .90$; see Little, 2013). The initial model considered all 27 items. If we could not obtain a reasonably parsimonious model that considered all 27 items, we created the following secondary analysis strategy: We would first analyze the original CJCS items in

an EFA that would attempt to replicate the factor structure found in previous research. We would then content analyze the new item pool to determine the optimal subset of items to retain in subsequent analyses. These items would then be analyzed using EFA. A final model would then combine the CJCS and new item analyses.

After obtaining an optimal factor structure, we estimated internal consistency of the final scales using Cronbach's coefficient alpha, using the item-level scores for the items indicating each factor. We then added all criterion variables (self-rated health, interview language, and weekly hours of care) to the final latent variable model and assessed criterion correlations between these variables and the latent factors. These criterion measures have been used in prior studies with Latino samples to examine caregiver health outcomes (Losada et al., 2006), culture (Almeida, Molnar, Kawachi, & Subramanian, 2009), and burden and intensity (Evercare & National Alliance for Caregiving, 2008).

Table 2. Characteristics of Caregivers, Caregiving Situation, and Care Receivers ($N = 163$)

Characteristic	Total percent or mean (range)
Primary caregiver	
Age (years)	57 (20–84)
Education	
<High school	40
High school	29
Some college or trade school	22
College or post graduate degree	9
Median annual income	\$15,000 (\$0–\$125,000)
Married or living with partner	63
Health status (percent endorsed)	
Excellent	9
Very good or good	48
Fair or poor	43
Caregiving situation	
Caregiver and care receiver sharing household	65
Care receiver–caregiver relationship	
Husband–wife relationship	23
Parent–daughter relationship	50
Other family relationship	27
Length of caregiving (percent of sample)	
<1 year	5
1–4 years	81
≥5 years	14
Hours spent weekly giving care	
<10	22
10–19	23
20+	56
Care receiver	
Age (years)	76 (46–96)
Top health problems	
High blood pressure	57
Diabetes	56
Arthritis	48
Unsteady, prone to falling	37
Hearing loss	36
Number of activities needs help with	10 (4–15)
Female	62

Results

Study participants represented a broad range of socioeconomic backgrounds and caregiving situations (Table 2). The average caregiver age was 57 years (range: 20–84 years). Almost half of the caregivers rated their health status as *very good* or *good* (48%) and slightly less reported their health as *fair* or *poor* (43%). Many caregivers lived with their care receivers (65%), and most (63%) were married or living with a partner. Half of the sample lived below the federal poverty level. Half of the participants were providing care

to a parent (50%), followed by care to another family member (27%), and care to a husband (23%). The majority of women had been caregivers for 1–4 years (81%), and more than half of women (56%) provided care for 20 or more hours a week, assisting with an average of 10 ADLs/IADLs. Study participants were mostly caring for women and for older family members with multiple chronic conditions.

Preliminary Factor Analyses

Eigenvalues for the full 27-item correlation matrix suggested a wide range of possible models. The scree plot suggested a two-factor solution, whereas the Kaiser–Guttman rule suggested eight factors. Two- through eight-factor solutions were examined, and none provided acceptable fit according to all three fit statistics considered (RMSEA, CFI, and TLI). The seven- and eight-factor solutions produced minimally acceptable fit according to the RMSEA and CFI, but neither solution was readily interpretable. These solutions included factors with either no or few statistically significant factor loadings. We therefore followed the secondary analysis strategy described earlier.

The first EFA model only considered items included from that scale. The Kaiser–Guttman rule suggested two factors and the scree plot suggested one factor. Only the two-factor model fit the data well (χ^2 ($df = 26$) = 44.40, $p = .014$; RMSEA = .07 [90% confidence interval CI: 0.03, 0.10]; CFI = .95; TLI = .91). The first factor was primarily defined by Item 1, and dropping this item resulted in a single-factor model with acceptable fit (χ^2 ($df = 27$) = 47.39, $p = .009$; RMSEA = .07 [90% CI: 0.03, 0.10]; CFI = .93; TLI = .91). Despite finding acceptable model fit, we removed three additional items (Items 4, 5, and 8; Table 1) that performed poorly in the reduced factor model. These items were removed from all subsequent analyses in order to ensure a parsimonious factor structure.

The next set of models examined the new item pool. We first hand-culled items based on item content and then performed a series of EFA models using the processes and criteria specified earlier. Indicators with very low factor loadings on all relevant factors were dropped, and the analyses were rerun until a good-fitting solution with simple structure was obtained.

This series of models suggested that eight items be retained from the pool of new items, and we next ran an EFA of all eight items. Both the scree test and Kaiser–Guttman rule suggested two factors, so one-, two-, and three-factor solutions were examined. Only the three-factor solution fit the data well (χ^2 ($df = 7$) = 5.62, $p = .59$; RMSEA = .00 [90% CI: 0.00, 0.08]; CFI = 1.00; TLI = .100). The unexpectedly good fit was likely due to having two factors that were primarily defined by two items each. Although such poorly indicated factors would typically be omitted from a final solution, we retained them in the present study because they represented constructs that were especially relevant for answering the research questions (i.e., burden and caregiving

Table 3. Final Factor Loadings for the 14-Item COSMOW

Item	Factor 1	Factor 2	Factor 3	Factor 4
	Familism	Obligation	Burden	Caregiving intensity
1. It is important to set an example for the children in the family (CJCS 2)	.31**			
2. I was taught by my parents to take care of elderly dependent family members (CJCS 3)	.72***			
3. It strengthens the bonds between me and them (CJCS 6)	.57***			
4. I was raised to believe care should be provided in the family (CJCS 7)	.72***			
5. I feel as though I am being useful and making a family contribution (CJCS 9)	.48***			
6. My family expects me to provide care (CJCS 10)		.46***		
7. It is my obligation to take care of my relative (New 11)		.62***		
8. I take care of my relative because if I didn't, nobody else would (New 14)	-.32**	.63***		
9. I take care of my relative because it's part of the Mexican tradition (New 16)		.50***		
10. Caregiving means having a cross to bear (New 17)			.71***	
11. Being a caregiver is a burden to me (New 18)			.76***	
12. Being a caregiver is hard on my body (New 22)				.86***
13. Being a caregiver is hard on my mind (New 23)				.89***
14. I take care of my relative to keep her/him from feeling alone or abandoned (New 24)		.59***		

Notes: CJCS = Cultural Justifications for Caregiving Scale; COSMOW = Caregiving Orientation Scale for Mexican-Origin Women.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4. Correlations Among COSMOW Factors, Spanish Language Survey, Self-rated Health, and Weekly Hours of Caregiving

	1.	2.	3.	4.	5.	6.	7.
1. Spanish	1.00						
2. Self-rated health	-.28**	1.00					
3. Weekly hours of care	.09	-.12	1.00				
4. Familism	.11	.15	-.09	1.00			
5. Obligation	.18	-.09	.14	.25*	1.00		
6. Burden	.05	-.21*	.26**	-.35**	.46***	1.00	
7. Intensity	-.31***	-.13	.18*	-.22*	.34**	.63***	1.00

Notes: COSMOW = Caregiving Orientation Scale for Mexican-Origin Women.

* $p < .05$. ** $p < .01$. *** $p < .001$.

intensity; discussed in the Four-Factor EFA Model section below). The decision to retain these factors therefore rests on the highly inductive nature of EFA, providing a starting point for future research that should expand the number of items explicitly measuring these dimensions of caregiving.

To ensure local identification of these poorly defined factors, and to facilitate model convergence in the subsequent models, we ran a "confirmatory" factor analysis (CFA) that specified a three-factor solution suggested by preparatory EFAs of these variables. The resulting model fit well ($\chi^2 (df = 17) = 16.44, p = .49$; RMSEA = .00 [90% CI: 0.00, 0.07]; CFI = 1.00; TLI = 1.00) and was used as the basis for the final model described next.

Four-factor EFA Model

We fit a hybrid EFA/CFA model that included the six items retained from the analysis of the original Dilworth-Anderson

scale and the eight items retained from the new item pool. The model specified two EFA factors to accommodate the two main factors suggested by the preliminary models, as well as two CFA factors. Each CFA factor was indicated by two items as described earlier. The resulting model displayed good fit ($\chi^2 (df = 63) = 70.52, p = .24$; RMSEA = .03 [90% CI: 0.00, 0.06]; CFI = .99; TLI = .98). The four factors represented familism (five items from the original CJCS and one of the new items), obligation (one item from the original CJCS and four of the new items), burden (two of the new items), and caregiving intensity (two of the new items). The items loading on familism indicated the extent to which a caregiver was influenced by familial cultural values (e.g., "I was taught by my parents to take care of elderly dependent family members"). Obligation indicated the degree to which a caregiver felt obliged to provide care (e.g., "It is my obligation to take care of my relative"). The two items that loaded on the burden factor represented the

extent to which caregivers interpreted caregiving as burdensome (e.g., “Being a caregiver is a burden to me”). The two items that loaded on the intensity factor indicated the caregivers’ feelings regarding how difficult caregiving was on them (e.g., “Being a caregiver is hard on my body”).

Table 3 presents factor loadings from this four-factor model, with all factor loadings whose absolute magnitudes were less than .30 suppressed to improve clarity. Cronbach’s alphas for the obligation, burden, and intensity factors were .69, .69, and .86, respectively. We found that the Cronbach’s alpha for the familism factor was .58 when all six items were included. The alpha improved to .68 when New Item 14 was omitted, suggesting that this item produced an unwanted cross loading on the familism factor and belonged only on the obligation factor. These four constructs together suggested a more comprehensive cultural orientation to the caregiver role rather than only cultural justifications as defined by the CJCS. Thus, we named the combined CJCS and new items the Caregiving Orientation Scale for Mexican-Origin Women (COSMOW) to represent a more complex set of factors that explains caregiving in this sample.

Associations of COSMOW With Self-rated Health, Spanish Survey Language, and Weekly Hours of Care

Table 4 shows the correlations among the four latent COSMOW factors, self-rated health, Spanish language, and weekly hours of care. Based on Cohen’s guidelines for interpreting the magnitude of correlations (Cohen, 1988), the correlations were small for Spanish-language administration and obligation and burden and medium yet significant for Spanish-language administration and intensity ($p < .001$). The correlations were small for self-rated health and all of the COSMOW scale constructs, although burden was significant at p less than .05. Weekly hours of care provided was positively correlated with burden ($p < .01$) and intensity ($p < .05$), which were themselves positively correlated ($p < .001$). Obligation was also positively correlated with burden ($p < .001$) and intensity ($p < .01$) and with familism ($p < .05$), although familism was negatively correlated with burden ($p < .01$) and intensity ($p < .05$).

Discussion

This article describes the development of caregiver role scales among a sample of Mexican-origin female caregivers, based on our own formative research and the CJCS developed for African American caregivers (Dilworth-Anderson et al., 2004). In contrast to the single-factor solution found previously among African American and White caregivers (Dilworth-Anderson et al., 2004), we found support for four factors comprised of six items from the CJCS and eight new items. This new 14-item hybrid scale (COSMOW) includes more aspects of caregiving than

the CJCS, providing a more comprehensive assessment of underlying cultural motivations for elder care in this Latino subgroup.

The four factors comprising the COSMOW reflect a cultural orientation to caregiving that includes family and personal expectations, socialization processes, feelings of burden, and consequences of caregiving. These four factors (familism, obligation, burden, and intensity) are supported by prior caregiver studies with Latino samples and in the broader literature. For example, familism has been described as a structure of the Latino family that explains interrelations regarding child rearing, god parenting, surrogate grand parenting, and elder caregiving (John, Resendiz, & De Vargas, 1997; Losada et al., 2010; Mendez-Luck et al., 2016; Scharlach et al., 2006). Our findings are especially consistent with those of prior literature on family interconnectedness and identification (Almeida et al., 2009; Lugo-Steidel & Contreras, 2003; Sabogal et al., 1987) as they relate to beliefs on elder caregiving.

As suggested by others, we found that elder caregiving is complex and multifaceted and should not be constrained by familism alone (Rochelle, 1997; Wallace & Facio, 1987). Indeed, some studies have shown familism as a protective factor against burden (Losada et al., 2006; Scharlach et al., 2006), whereas other studies have shown familism to be related to caregiver distress (Youn, Knight, Jeong, & Benton, 1999), higher levels of depression, and perceived stress (Rozario & DeRienzi, 2008). Thus, these mixed findings lend support to the multidimensionality of caregiver orientation that we found in our study.

The other factors of the COSMOW indicated that caregiver burden and intensity were important components of caregivers’ overall orientation to the role. The significant positive associations between burden and intensity and hours of weekly care provided are consistent with the broader caregiving literature. Additionally, the negative correlation between burden and self-rated health is also supported by prior research, in which caregiving has found to be associated with negative health outcomes for caregivers (Pinquart & Sörensen, 2005, 2007).

We found that burden and intensity were negatively associated with familism but positively associated with obligation, and paradoxically, familism was weakly associated with obligation. These findings suggest that caregivers may have conflicting motivations for caregiving that affect their overall orientation to the role. One explanation is that beliefs about family dynamics and one’s personal responsibility toward family members are harmonious until caregiving burden and intensity increase to a point where negative feelings of obligation begin to outweigh the positive feelings of familism. Findings from a recent study with Mexican-origin caregivers suggested that feelings of obligation to provide elder care were tied to the fulfillment of the *marianismo* role (Mendez-Luck & Anthony, 2015), a socially constructed gender role in Mexican culture. Thus, our findings may reflect a cultural orientation

to caregiving that flexes with the caregiving load. It bears mentioning that because the reliability was relatively low for some scales, it would be prudent to use latent variable models when examining these cultural constructs in future research.

Limitations

There are some limitations to this study. First, this was a cross-sectional study of a small convenience sample of Mexican-origin women who were caregivers at the time of the study. The COSMOW needs to be further evaluated on an independent sample to determine its wider applicability in this Latino subpopulation. In particular, we did not examine the relationships between caregivers' acculturation levels, educational attainment, or financial resources and their orientation to the caregiver role. Additionally, future research should examine whether the one cross-loaded item on the familism factor (i.e., "I take care of my relative because if I didn't, nobody else would") should be included when computing scale scores. Lastly, the COSMOW currently consists of 14 questions, which limits its practicality as an assessment tool for practitioners and direct service providers. More research is needed to determine whether the scale can be reduced without compromising its psychometric properties so as to widen its applicability beyond the research setting.

Implications

The health consequences associated with caregiving are well documented. Incorporating caregiver needs assessment into clinical, home-, and community-based long-term care settings has become increasingly recognized as a valuable strategy for maintaining caregiver health and avoiding burnout (Family Caregiver Alliance, 2016). Identifying caregiver needs before burnout occurs may be especially critical for Latino caregivers because they are more likely to be high intensity caregivers (Evercare & National Alliance on Caregiving, 2008) yet tend to use formal services less or be less aware of available services than other caregiver populations (Crist et al., 2009; Mausbach et al., 2004). The COSMOW is a potentially useful tool for identifying those Mexican-origin caregivers who may be at higher risk for the health consequences associated with caregiving and burnout due to their perceived cultural obligation, intensity, and burden related to caregiving. Lastly, the COSMOW may be useful in helping to understand the beliefs underlying some Mexican-origin caregivers' help-seeking behaviors, such that services can be tailored to be more culturally responsive to their caregiving needs. However, Mexican-origin Latinos represent only one subgroup in the Latino population. More research is warranted to examine how the orientation to the caregiver role might differ within a heterogeneous Latino population.

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Conflict of Interest

No conflict of interest, financial or other, exists for the authors of this article.

References

- Administration on Aging. (2015). A statistical profile of Hispanic older Americans aged 65+. Retrieved from http://www.aoa.acl.gov/Aging_Statistics/minority_aging/Facts-on-Hispanic-Elderly.aspx
- Almeida, J., Molnar, B. E., Kawachi, I., & Subramanian, S. V. (2009). Ethnicity and nativity status as determinants of perceived social support: Testing the concept of familism. *Social Science & Medicine*, *68*, 1852–1858. doi:10.1016/j.socscimed.2009.02.029
- Beatty, P. C., & Willis, G. B. (2007). Research synthesis: The practice of cognitive interviewing. *Public Opinion Quarterly*, *71*, 287–311. doi:10.1093/poq/nfm006
- Bernard, H. R. (1995). *Research methods in anthropology: Qualitative and quantitative approaches* (2nd ed.). Walnut Creek, CA: AltaMira Press.
- Cattell, R. B. (1966). The Scree test for the number of factors. *Multivariate Behavioral Research*, *1*, 245–276. doi:10.1207/s15327906mbr0102_10
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Crist, J. D., McEwen, M. M., Herrera, A. P., Kim, S., Pasvogel, A., & Hepworth, J. T. (2009). Caregiving burden, acculturation, familism, and Mexican American elders' use of home care services. *Research & Theory for Nursing Practice*, *23*, 165–180. doi:10.1891/1541-6577.23.3.165
- Dilworth-Anderson, P., Brummett, B. H., Goodwin, P., Williams, S. W., Williams, R. B., & Siegler, I. C. (2005). Effect of race on cultural justifications for caregiving. *The Journals of Gerontology, Series B: Psychological and Social Sciences*, *60*, S257–S262. doi:10.1093/geronb/60.5.S257
- Dilworth-Anderson, P., Goodwin, P. Y., & Williams, S. W. (2004). Can culture help explain the physical health effects of caregiving over time among African American caregivers? *The Journals of Gerontology, Series B: Psychological and Social Sciences*, *59*, S138–S145. doi:10.1093/geronb/60.5.S257
- Dilworth-Anderson, P., Williams, I. C., & Gibson, B. E. (2002). Issues of race, ethnicity, and culture in caregiving research: A 20-year review (1980–2000). *The Gerontologist*, *42*, 237–272. doi:10.1093/geront/42.2.237
- Evercare & National Alliance on Caregiving. (2008). *Evercare Study of Hispanic Family Caregiving in the U.S.: Findings*

- from a national study. Minnetonka, MN: National Alliance for Caregiving & Evercare.
- Family Caregiver Alliance. (2016). Caregiver assessment: Principles, guidelines and strategies for change. Report from a national Consensus Development Conference (Vol. I). Retrieved February 25, 2016, from https://caregiver.org/sites/caregiver.org/files/pdfs/v1_consensus.pdf
- Gelman, C. R. (2014). Familism and its impact on the family caregiving of Latinos with Alzheimer's disease: A complex narrative. *Research on Aging*, *36*, 40–71. doi:10.1177/0164027512469213
- Guttman, L. (1940). Multiple rectilinear prediction and the resolution into components. *Psychometrika*, *5*, 75–99. doi:10.1007/BF02287866
- Hays, R. D., Spritzer, K. L., Thompson, W. W., & Cella, D. (2015). U.S. general population estimate for “excellent” to “poor” self-rated health item. *Journal of General Internal Medicine*, *30*, 1511–1516. doi:10.1007/s11606-015-3290-x
- John, R., Resendiz, R., & De Vargas, L. W. (1997). Beyond familism? Familism as explicit motive for eldercare among Mexican American caregivers. *Journal of Cross-Cultural Gerontology*, *12*, 145–162. doi:10.1023/A:1006505805093
- Jolicoeur, P. M., & Madden, T. (2002). The good daughters: Acculturation and caregiving among Mexican-American women. *Journal of Aging Studies*, *16*, 107–120. doi:10.1016/S0890-4065(02)00038-5
- Katz, S. (1983). Assessing self-maintenance: Activities of daily living, mobility and instrumental activities of daily living. *Journal of American Geriatrics Society*, *31*, 721–726. doi:10.1111/j.1532-5415.1983.tb03391.x
- Kaiser, H. F. (1960) The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, *20*, 141–151. doi:10.2466/pr0.1991.68.3.855
- Kaiser, H. F. (1991). Coefficient alpha for a principal component and the Kaiser–Guttman rule. *Psychological Reports*, *68*, 855–858. doi:10.1177/001316446002000116
- Kao, H.-F. S., Lynn, M. R., & Crist, J. D. (2013). Testing of applicability of Mutuality Scale with Mexican American caregivers of older adults. *Journal of Applied Gerontology*, *32*, 226–247. doi:10.1177/0733464811416813
- Knight, B. G., & Sayegh, P. (2010). Cultural values and caregiving: The updated Sociocultural Stress and Coping Model. *The Journals of Gerontology, Series B: Psychological and Social Sciences*, *65*, 5–13. doi:10.1093/geronb/gbp096
- Larsen, A. C. (2013). *Oregon update: Migrant and Seasonal Farmworker Enumeration Profiles Study*. Vahon Island, WA: Larson Assistance Services.
- Lawton, M. P., & Brody, E. M. (1969). Assessment of older people: Self-maintaining and instrumental activities of daily living. *The Gerontologist*, *9*, 179–186. doi: 10.1093/geront/9.3_Part_1.179
- Little, T. D. (2013). *Longitudinal structural equation modeling*. New York: Guilford Press.
- Losada, A., Marquez-Gonzalez, M., Knight, B. G., Yanguas, J., Sayegh, P., & Romero-Moreno, R. (2010). Psychosocial factors and caregivers' distress: Effects of familism and dysfunctional thoughts. *Aging & Mental Health*, *14*, 193–202. doi:10.1080/13607860903167838
- Losada, A., Robinson Shurgot, G., Knight, B. G., Márquez, M., Montorio, I., Izal, M., & Ruiz, M. A. (2006). Cross-cultural study comparing the association of familism with burden and depressive symptoms in two samples of Hispanic dementia caregivers. *Aging & Mental Health*, *10*, 69–76. doi:10.1080/13607860500307647
- Lopez, G., & Patton, E. (2015). The impact of slowing immigration: Foreign-born share falls among 14 largest U.S. Hispanic origin groups. Pew Research Center: Hispanic Trends website. Retrieved from <http://www.pewhispanic.org/2015/09/15/the-impact-of-slown-immigration-foreign-born-share-falls-among-14-largest-us-hispanic-origin-groups/>
- Lugo-Steidel, A. G., & Contreras, J. M. (2003). A new familism scale for use with Latino populations. *Hispanic Journal of Behavioral Sciences*, *25*, 312–330. doi:10.1177/0739986303256912
- Mausbach, B. T., Coon, D. W., Depp, C., Rabinowitz, Y. G., Wilson-Arias, E., Kraemer, H. C., ... Gallagher-Thompson, D. (2004). Ethnicity and time to institutionalization of dementia patients: A comparison of Latina and Caucasian female family caregivers. *Journal of the American Geriatrics Society*, *52*, 1077–1084. doi:10.1111/j.1532-5415.2004.52306.x
- Mendez-Luck, C. A., & Anthony, K. P. (2015). *Marianismo* and caregiving role beliefs among U.S.-born and immigrant Mexican women. *The Journals of Gerontology, Series B: Psychological and Social Sciences*. Advance online publication. doi:10.1093/geronb/gbv083
- Mendez-Luck, C. A., Applewhite, S. R., Lara, V., & Toyokawa, N. (2016). The concept of familism in the lived experiences of Mexican-origin caregivers.” *Journal of Marriage & Family*, *78*, 813–829. doi:10.1111/jomf.12300
- Mendez-Luck, C. A., Kennedy, D. P., & Wallace, S. P. (2008). Concepts of burden in giving care to older relatives: A study of female caregivers in a Mexico City neighborhood. *Journal of Cross-Cultural Gerontology*, *23*, 265–282. doi:10.1007/s10823-008-9058-6
- Mendez-Luck, C. A., Kennedy, D. P., & Wallace, S. P. (2009). Guardians of health: The dimensions of elder caregiving among women in a Mexico City neighborhood. *Social Science & Medicine*, *68*, 228–234. doi:10.1016/j.socscimed.2008.10.026
- Mendez-Luck, C. A., Trejo, L., Miranda, J., Jimenez, E., Quiter, E. S., & Mangione, C. M. (2011). Partnering with community based organizations in recruiting Mexican-origin populations in East Los Angeles. *The Gerontologist*, *51*, S94–S105. doi:10.1093/geront/gnq076
- Motel, S., & Patten, E. (2012). The 10 largest Hispanic origin groups: Characteristics, rankings, top counties. Retrieved from <http://www.pewhispanic.org/2012/06/27/the-10-largest-hispanic-origin-groups-characteristics-rankings-top-counties/>
- Osborn, J. W. (2014). Pest practices in exploratory factor analysis. Retrieved from https://www.researchgate.net/publication/265248967_Best_Practices_in_Exploratory_Factor_Analysis
- Peñalosa, F. (1968). Mexican family roles. *Journal of Marriage and the Family*, *30*, 680–688. doi:10.2307/349517
- Pinquart, M., & Sörensen, S. (2007). Correlates of physical health of informal caregivers: A meta-analysis. *Journal of Gerontology*, *62*, 126–137. doi:10.1002/gps.4323
- Pinquart, M., & Sörensen, S. (2005). Ethnic differences in stressors, resources, and psychological outcomes of family caregiving: A meta-analysis. *The Gerontologist*, *45*, 90–106. doi:10.1093/geront/45.1.90
- Rochelle, A. R. (1997). *No more kin: Exploring race, class, and gender in family networks*. Thousand Oaks, CA: Sage. doi:10.4135/9781483328034

- Rodriguez, M. D., Rodriguez, J., & Davis, M. (2006). Recruitment of first-generation Latinos in a rural community: The essential nature of personal contact. *Family Process, 45*, 87–100. doi:10.1111/j.1545-5300.2006.00082.x
- Rozario, P. A., & DeRienzi, D. (2008). Familism beliefs and psychological distress among African American women caregivers. *The Gerontologist, 48*, 772–780. doi:10.1093/geront/48.6.772
- Sabogal, F., Marín, G., Otero-Sabogal, R., Marín, B., & Perez-Stable, E. (1987). Hispanic familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences, 9*, 397–412. doi:10.1177/07399863870094003
- Scharlach, A. E., Kellam, R., Ong, N., Baskin, A., Goldstein, C., & Fox, P. J. (2006). Cultural attitudes and caregiver service use: Lessons from focus groups with racially and ethnically diverse family caregivers. *Journal of Gerontological Social Work, 47*, 133–156. doi:10.1300/J083v47n01_09
- Shurgot, G. S. R., & Knight, B. G. (2004). Preliminary study investigating acculturation, cultural values, and psychological distress in Latino caregivers of dementia patients. *Journal of Mental Health and Aging, 10*, 183–194.
- U.S. Census Bureau. (2010). U.S. Census Bureau QuickFacts Beta. Los Angeles County, California. [data file]. Retrieved from <http://www.census.gov/quickfacts/table/PST045214/06037,00>
- Vega, W. A., & Gonzalez, H. M. (2012). Latinos “aging in place”: Issues and potential solutions. In J. L. Angel, F. Torres-Gil, & K. Markides (Eds.) *Aging, health, and longevity in the Mexican-origin population*. New York, NY: Springer. doi:10.1007/978-1-4614-1867-2_15
- Wallace, S. P., & Facio, E. L. (1987). Moving beyond familism: Potential contributions of gerontological theory to studies of Chicano/Latino aging. *Journal of Aging Studies, 1*, 337–354. doi:10.1016/0890-4065(87)90009-0
- Youn, G., Knight, B. G., Jeong, H., & Benton, D. (1999). Differences in familism values and caregiving outcomes among Korean, Korean American, and White American caregivers. *Psychology and Aging, 14*, 355–364. doi:10.1037/0882-7974.14.3.355