Resilience in Dementia Caregivers from Argentina and Mexico: Psychometric Properties of the Spanish Resilience Scale for Adults

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ABSTRACT

This study examined the psychometric properties and factor structure of the Resilience Scale for Adults (RSA) translated into Spanish in dementia caregivers from Argentina (n = 110) and Mexico (n = 20), as well as the basic structure of resilience in this population. Participants completed a survey with a psychologist including measures of resilience, optimism, and sense of coherence. A confirmatory factor analysis suggested that the factor structure in the original RSA validation study did not fit the current data well. An exploratory factor analysis helped eliminate poorly loading items and suggested that four of the original resilience subscales (social support, personal competence, family coherence, and social competence) transferred well to dementia caregivers in Latin America, although the original factor of personal structure did not. In the original validation study, personal competence was the first and largest factor, whereas in the current sample, social support was. The Spanish RSA showed high α s at the subscale and total score levels, as well as good convergent validity. This study contributes a validated measure of resilience to be used in dementia caregivers in Latin America and has implications for understanding the basic structure of resilience in this population.

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Epidemiology and Symptoms of Dementia

Dementia affects 35.6 million people worldwide, and the number of individuals living with the disease is expected to double every 20 years.[1] Prevalence estimates are particularly elevated in Latin America where the number of older adults will almost quadruple between 2005 and 2050, thereby outnumbering the young population by 30%.[2] In part because of this large increase of older adults in Latin America, 8.5% of the population has dementia, as compared to 6.5% in the United States, 6.9% in Western Europe, and 4.2% in Eastern Asia.[1] Because dementia primarily affects older adults,[3] the projected increase in individuals aged 60 and older in Latin America is especially concerning.[2]

Although dementia rates increase with age, symptoms are not considered part of the typical aging process[3] and involve progressive deterioration of cognitive, emotional, and behavioral functioning.[4] Impairments in memory, object identification, and motor activities are central features.[4] Related symptoms include communication deficits, poor judgment, changes in mood and personality, psychotic symptoms, and difficulty completing activities of daily living such as bathing or eating.[5] As the syndrome advances, individuals with dementia face severe symptoms often resulting in complete inability to carry out these activities.[6]

Dementia Caregiver Problems

The pervasive impairments experienced by people with dementia can necessitate constant assistance from informal caregivers, typically family members.[7] Caregiving involves a significant expenditure of time, energy, and finances.[8] Caregivers provide an array of hands-on assistance to the individual with dementia, such as help performing activities of daily living, as well as managing the behavioral and cognitive symptoms of dementia.[9] Caregiving tasks are sometimes shared among multiple family members or friends, but in most cases, the majority of care is provided by one individual.[8]

The amount of time and intensity of caregiving responsibilities increases as the symptoms of dementia progress,[10] and when compared to caregivers of older adults with other types of medical conditions, dementia caregivers are at risk for unfavorable mental and physical health outcomes.[11] These outcomes include depression and anxiety,[12] social isolation,[13-15] and difficulty coping.[16] Compared to non-caregivers, dementia caregivers experience poorer health-related quality of life and more health concerns,[11,17-19] as well as increased mortality risk.[20]

Resilience

Despite these well-documented negative outcomes, an emerging body of research has examined dementia caregivers who are *not* negatively affected by caregiving and who may actually thrive in the face of caregiving demands.[21] Such research has its roots in the literature on resilience, a relatively new construct referring to a trajectory of normal development despite chronic stress, maltreatment, or adversity[22], and not merely the absence of psychopathology.[23] Resilient individuals have the ability to endure difficult life circumstances remarkably well, maintaining relatively stable, healthy levels of psychological and physical functioning.[23] Although resilient individuals may experience temporary disruptions in normal functioning, their trajectory is generally characterized by functional stability as well as the capacity to flourish psychologically.[23-24] Further, resilience following aversive life circumstances may be a more common phenomenon than researchers once believed.[23,25-26]

Resilience is a multidimensional construct, and protective factors are considered to lie either within individuals themselves or within their environments.[22] Thus, determinants of resilience are typically classified into three broad categories: psychological/dispositional attributes, family support and cohesion, and external support systems.[27-30] Resilient individuals often have an internal locus of control, hold a positive self-image, are optimistic, and exhibit empathy and other prosocial behaviors.[31-33] They more strongly organize their lives[34] and compared to their less resilient counterparts, have the ability to distance themselves psychologically.[35] These favorable personality dispositions and attitudes, in turn, foster strong, stable support networks.[36]

Although much research exists regarding resilience as a whole, relatively few studies have examined characteristics of dementia caregivers who successfully cope with caregiving stress. The paucity of literature in this area is surprising, because despite high strain, many dementia caregivers actually remain free of significant distress.[37] One study of the relationship between resilience and depression found that spousal dementia caregivers with high levels of resilience were less likely to experience depressive symptoms up to one year later.[37] These resilient caregivers reported high levels of perceived control and were more likely to believe that life's challenges provide opportunities to increase skills and self-knowledge.[37] Resilient dementia caregivers also endorse a greater sense of confidence in their caregiving abilities, possess problem-solving skills, and have a strong sense of religion or spirituality.[38-39] High levels of social support, particularly from within the family, have been associated with higher resilience in dementia caregivers.[40]

Culture and Caregiving

Coping strategies that have the potential to contribute to resilience among caregivers differ between caregivers of different racial/ethnic groups.[41] As compared to White dementia caregivers, Latino caregivers report using more religious coping strategies (e.g., prayer), perceive behavioral problems of the care recipient as less stressful, and generally view caregiving as a more positive experience.[41] Other research has shown that Latino dementia caregivers have higher levels of self-efficacy compared to their White counterparts.[42] These observed differences in coping and appraisals of caregiving tasks may suggest different pathways to resilience in Latino populations.

Latino cultures are frequently described as collectivist in nature, in that social behavior is determined by objectives of the in-group instead of through an effort to achieve one's own goals.[43] The key value of familism, for instance, emphasizes loyalty to the family as well as the perceived obligation to provide support to ill family members.[43-48] Familism has been observed in Latino

caregivers in the United States, in that compared to their White counterparts, they report stronger familial commitment beliefs.[49] The only study to have specifically investigated resilience in Latin American dementia caregivers found that higher resilience was related to better emotional and physical health status.[21] In particular, caregiver variables (e.g., personality features, appraisals, and type of coping) were more strongly associated with resilience than were situational variables such as caregiving context. Overall, this study supports previous findings suggesting the unique role of culture in coping style and appraisals.[41-42]

Current Study

Despite the unique aspects of dementia caregiving in Latino cultures and the budding research examining resilience in caregivers, to date there has been no attempt to validate a measure of resilience among dementia caregivers in Latin America, and as a result, to examine the basic structure of resilience in this population. Friborg and colleagues[22] developed the five-factor Resilience Scale for Adults (RSA), which is one of the most common and comprehensive scales measuring the presence of resources that promote adult resilience.[50] The authors emphasized that because they found only low-to-moderate correlations among the subscales, the items tap five different aspects of resilience.[22] All five factors correspond with the three central categories of resilience found in the literature.[22] The first category, "psychological/dispositional attributes" consists of three dimensions labeled by the authors as "personal competence," "social competence," and "personal structure." Personal competence refers to one's level of self-esteem, self-liking, self-efficacy, hope, determination, and a realistic orientation to life, whereas social competence taps extraversion, social adeptness, ability to communicate successfully, and flexibility in the social arena. Personal structure is the ability to plan and organize one's daily routines.[22] The second category of "family support and cohesion" includes the scale dimension "family coherence." Family coherence refers to the extent of family conflict, as well as degree of cooperation, support, loyalty and sta-

bility within the family system.[22] The third and final resilience category "external support systems" is comprised of the dimension entitled "social support." This dimension measures both access to support from friends and relatives, as well as the individual's ability to provide support.[22]

Although the RSA[22] is used extensively throughout the resilience literature, it has not yet been validated with dementia caregivers. Nor has the RSA been translated into Spanish or used with any Latin American caregiving samples. Because Latino cultures have several distinct cultural values, it is unclear whether resilience operates according to the same five-factor structure established by the scale authors.[22] Therefore, the purpose of the current study was to examine the psychometric properties and factor structure of the RSA translated into Spanish in a group of dementia caregivers from Argentina and Mexico.

Method

Participants

Participants were 130 primary caregivers of an individual with dementia recruited from the Instituto de Neurociencias de San Lucas, Rosario Argentina and the CETYS University in Baja California, Mexico. The sample was composed of caregivers from Argentina (*n* = 110) and Mexico (*n* = 20). In this study, caregivers were defined as individuals providing active daily care for a person with dementia. Inclusion and exclusion criteria designated that the participant must be the primary caregiver of the person with dementia; must have been providing care to the person with dementia for at least three months; must be at least 18 years old; and must have no personal history of physical, psychological, or neurological problems. All caregivers provided care to a patient who had had a diagnosis of dementia, which was confirmed by a medical records review.

The mean age of caregivers was 56.84 years old (SD = 13.18), and most of the sample (77.7%) was female. The majority of the participants were married (76.9%), 12.3% were never married, and 4.6% were divorced or separated. Regarding relationship to the patient, 43.8% of caregivers were spouses,

43.1% were children, 7.7% were aunts or uncles, 2.3% were other, 1.5% were professional caregivers, 0.8% were friends, and 0.8% were parents. The average weekly time spent caregiving was 68.48 hours (SD = 30.64), and participants had been providing care for an average of 46.94 months (SD = 26.66). In regard to employment, 36.9% of the sample worked part-time outside the home, 7.7% worked full-time outside the home, and 10.8% were retired. In terms of highest level of education completed, 1.5% of the sample did not complete elementary school, 14.6% completed elementary school, 3.1% did not complete high school, 37.7% completed high school, 1.5% did not complete technical school, 3.8% completed technical school, 3.1% did not complete college, 30.8% completed college, and 38% completed post-graduate work. For income level, 0.8% of the sample earned under minimum wage, 13.1% earned one to two times minimum wage, 37.7% earned three to four times minimum wage, 24.6% four to five times, and 23.8% earned over five times minimum wage.

Measures

Caregivers completed a series of questionnaires assessing resilience and related constructs. A Spanish version of the 13-Item Sense of Coherence Scale (SOC-13)[51] was readily available.[52] The Resilience Scale for Adults (RSA)[22], Brief Resilience Scale,[53] and Life Orientation Test-Revised (LOT-R)[54] did not have Spanish versions available and were translated into Spanish. Chapman and Carter's[55] methodology was used by which a researcher who was bilingual and bicultural translated the original measure into Spanish. Another bilingual and bicultural researcher translated the items back into English. If any discrepancies arose between the original English and re-translated English versions of the measure, they were resolved mutually.

Resilience Scale for Adults (RSA). The RSA[22] was administered to assess the presence of protective resources that promote healthy adjustment to psychosocial adversity. As noted above, this 36-item scale consists of five dimensions of resilience: personal competence, social competence, family coherence, social support, and personal structure. On a 7-point Likert scale, respondents

indicate their degree of agreement with each item (1 being "not at all true" to 7 being "very true"). Although the scale authors originally developed 45 items, there were nine items that did not load distinctly onto any factor or achieve simple structure[22] and thus were removed from the current study, bringing the RSA to 36 items. Total scores range from 36 to 252, with higher scores indicating greater intrapersonal and interpersonal protective factors that are presumed to facilitate adaptation to life stresses.[22] Reliability of the RSA is adequate, with subscale αs ranging from .67 to .90, as are all subscale test-retest correlations (.69 to .84).[22] The scale has high construct validity, as evidenced by strong convergent and discriminant validity and its ability to differentiate between a patient sample and randomly chosen control sample.[22] Windle and colleagues,[50] in their review of resilience measurement scales, identified the RSA as a scale of high quality across a number of criteria.

Brief Resilience Scale (BRS). In order to provide an index of convergent validity for the RSA, the BRS[53] was administered which measures the ability to recover from stress or "bounce back." The scale is comprised of six items measuring a unitary construct of resilience. Caregivers were asked to rate the extent to which they agreed with each item, following a Likert-style response format ranging from 1 ("Strongly disagree") to 5 ("Strongly agree.") Scores range from 6 to 30, and higher scores suggest a greater ability to "bounce back." The BRS has high internal consistency ranging from .80 to .91. Test-retest reliability is high, with a one-month intraclass correlation (ICC) .69 for one sample and a three-month ICC of .62 for a second sample.[53]

Life Orientation Test-Revised (LOT-R). To measure caregivers' degree of dispositional optimism, the current study utilized the 10-item LOT-R.[54] Participants respond on a 5-point Likert-style scale ranging from 0 ("Strongly Disagree") to 4 ("Strongly Agree"). Total scores range from 0 to 40, with greater scores implying higher levels of optimism and a more positive overall outlook.[54] Scheier and colleagues[54] found a Cronbach's α of .78, suggesting an adequate level of internal consistency, as well as test-retest

reliability correlations ranging from .56 to .79. The LOT-R has demonstrated appropriate convergent and divergent validity; for instance, it is positively correlated with measures of self-esteem and self-mastery and negative correlated with measures of trait anxiety and neuroticism.[54]

Sense of Coherence Scale (SOC). In the current study, the 13-item SOC was used to assess the tendency to view the world as comprehensible (5 items), manageable (4 items), and meaningful (4 items).[51] "Comprehensibility" refers to the feeling that the world makes sense, and that information about the environment is ordered, consistent and can be explained. "Manageability" is the feeling that sufficient resources are available for meeting internal and external demands, while "meaningfulness" refers to the feeling that these demands are worthy of investment and engagement.[51,56] There are at least 15 different versions of the questionnaire available, with the SOC-13 having been used in at least 33 languages in 32 countries.[57] While response anchors differ, each item is answered with two opposite anchoring phrases on a 7-point scale. Total scores range from 13 to 91 with higher total scores indicating a greater sense of coherence or meaningfulness.[51] Eriksson and Lindström[57] found that in 127 studies using the SOC-13, α values ranged from .70 to .92. Test-retest correlations ranged from .69 to .78 (1 year), .64 (3 years), .42 to .45 (4 years), .59 to .67 (5 years) to .54 (10 years). There is strong evidence for criterion validity, as evidenced by a high negative correlation with anxiety and depression and a high positive correlation with optimism and self-esteem[57]. The SOC-13 has been previously validated on eight Spanish samples of varying age, education, gender, levels of disability, and level of functioning[52]; thus, this version of the scale was used in the present study. Virués-Ortega and colleagues[52] found adequate internal consistency (Cronbach's α = .80) as well as moderate correlations with self-reported measures of physical health, quality of life, and depression.[52]

Procedure

Participants were recruited from the Instituto de Neurociencias de San Lucas, Argentina and CETYS University in Baja California, Mexico. Caregivers in

Argentina were recruited from neurologist appointments attended by the family member with dementia. The caregiver was interviewed at the hospital while the patient was meeting with the physician. Participants in Mexico were recruited through flyer and word-of-mouth within the local community and via telephone using a contact list provided by the Alzheimer's Foundation of Baja California. The majority (85%) of these caregiver interviews took place at the individual's home; three interviews occurred at the Foundation. A psychologist met with each caregiver for approximately one hour during which socio-demographic information was collected and questionnaires were administered. All enrolled participants provided informed consent and were told that they could withdraw from the study at any time. Approval for this study was obtained by the appropriate ethics committees.

Statistical Analyses

Data were analyzed using SPSS v.23 and AMOS v.23. First, a confirmatory factor analysis (CFA) was conducted on the RSA to determine whether the original version's previously identified factor structure emerged in the same manner for dementia caregivers from Latin America in the Spanish version. A CFA tests the fit of a hypothesized pattern of relationships among manifest (observed) variables and latent (hidden) variables. Although traditionally CFAs tend to use samples greater than 200 participants,[58] models with high degrees of freedom can achieve higher power with smaller samples.[59] MacCallum et al.[59] found that models with degrees of freedom of 100 applied to samples with 100 participants have power between .65 and .43. Because the degrees of freedom for the CFA in this study is 584, the current sample size ($n = 130$) has substantial power, though the results of the CFA should be interpreted with some caution. Then, to determine whether a better factor structure could emerge and whether any items needed to be removed, an exploratory factor analysis (EFA) with principal axis factoring and a Promax rotation was performed on the items. After a final item composition and subscale structure were identified, Cronbach's αs were calculated for the total score and subscale scores. The final subscales were then correlated with the BRS, LOT-R,

and SOC to examine the Spanish RSA's convergent validity in this sample of dementia caregivers.

Results

Confirmatory Factor Analysis (CFA)

The manifest variables the CFA were the 36 items of the RSA, and the five latent constructs were those presumed to correspond to the five subscales of the RSA: personal competence, social competence, family coherence, social support, and personal structure. The CFA was comprised of 77 variables, of which 36 were observed, 36 were uniquenesses, and 5 were factors. The path diagram for the CFA appears in Figure 1. The RSA items (manifest variables) are represented in Figure 1 by boxes, which each loaded uniquely onto their respective subscale (latent variable), represented by ovals.

Model fit. The uniqueness term for each manifest variable in the CFA was significant ($p < .001$), suggesting that variance greater than 0 in each manifest variable was left unaccounted for. The χ^2 goodness-of-fit test provided initial evidence that overall, the five-factor solution did not fit the data well, because the ratio of the χ^2 statistic [$\chi^2(584) = 2025.98$, $p < .001$] to degrees of freedom was 3.47 and therefore greater than the conventional critical ratio cutoff of 2.0 for establishing good fit. A ratio of χ^2/degrees of freedom this large indicates a substantial difference between the observed and reproduced correlation matrices. The CFA yielded a root mean square error of approximation (RMSEA) of .138, where an RMSEA of .08 or lower indicates a reasonable error of approximation and adequate fit. Other evidence generally indicated that the five-factor solution was a poor fit with the data. The goodness of fit index (.56), adjusted goodness of fit index (.49), normed fit index (.67), incremental fit index (.74), Tucker-Lewis index (.72), and comparative fit index (.74) were all far below .90, the traditional cutoff establishing adequate fit. Overall, these goodness-of-fit indices suggest that the five-factor solution for the RSA poorly fit the data.

Parameters. All item loadings on their latent constructs were statistically significant (all ps < .001),
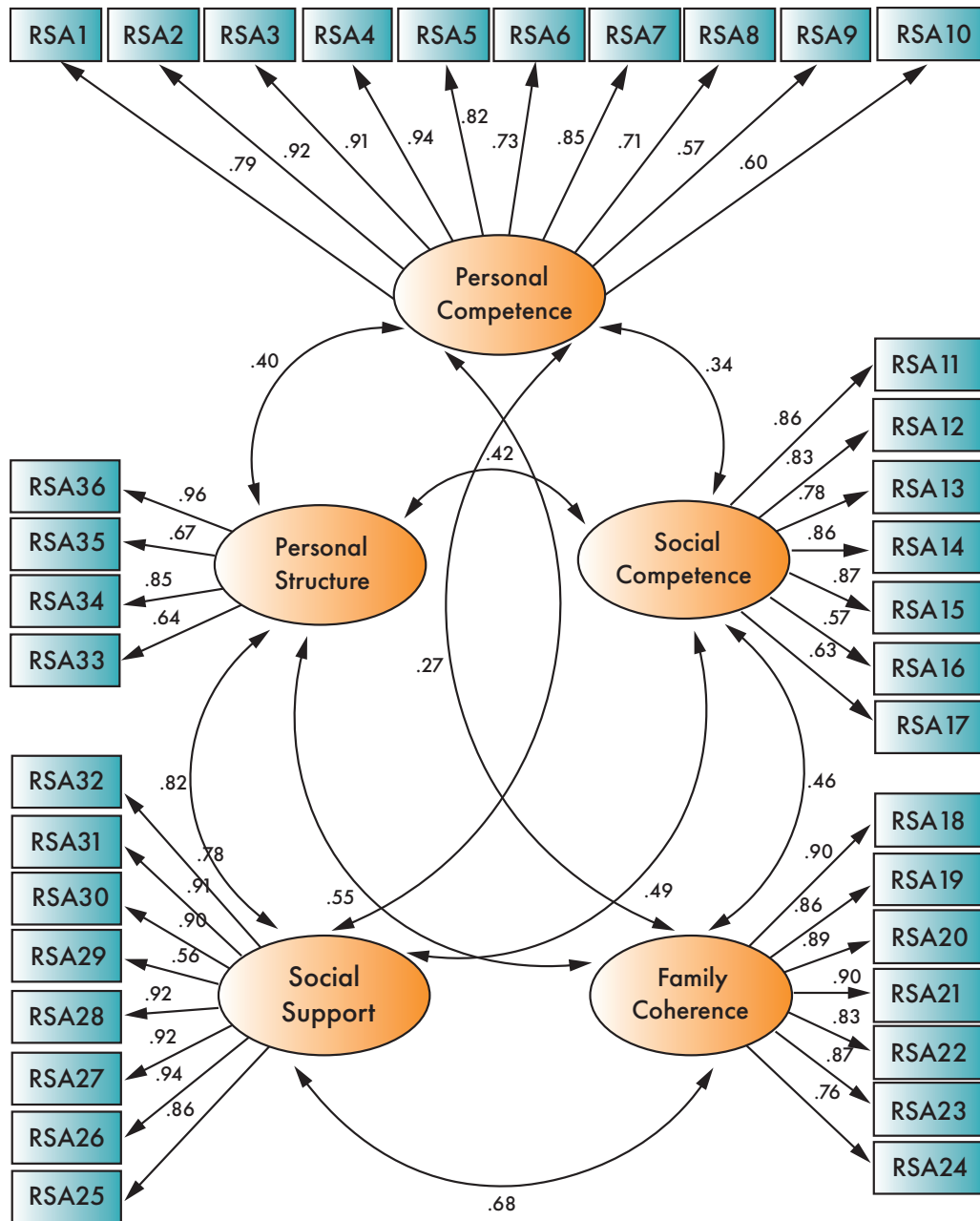
Figure 1. Confirmatory factor analysis.

suggesting that all items were a good index of their respective latent construct. The correlations between latent constructs shown in Figure 1 by the double-headed arrows ranged from .27 to .82 and were all statistically significant (all ps ≤ .003). This substantial range of correlation size suggests a large amount of overlap among some constructs, but not others, perhaps partially accounting for poor model fit.

Exploratory Factor Analysis (EFA)

In order to determine whether a different factor structure provided a better fit for the Spanish RSA in dementia caregivers from Latin America, an EFA assuming no *a priori* factor structure was performed using principal axis factoring and a Promax rotation including all 36 items. A scree plot (Figure 2) revealed
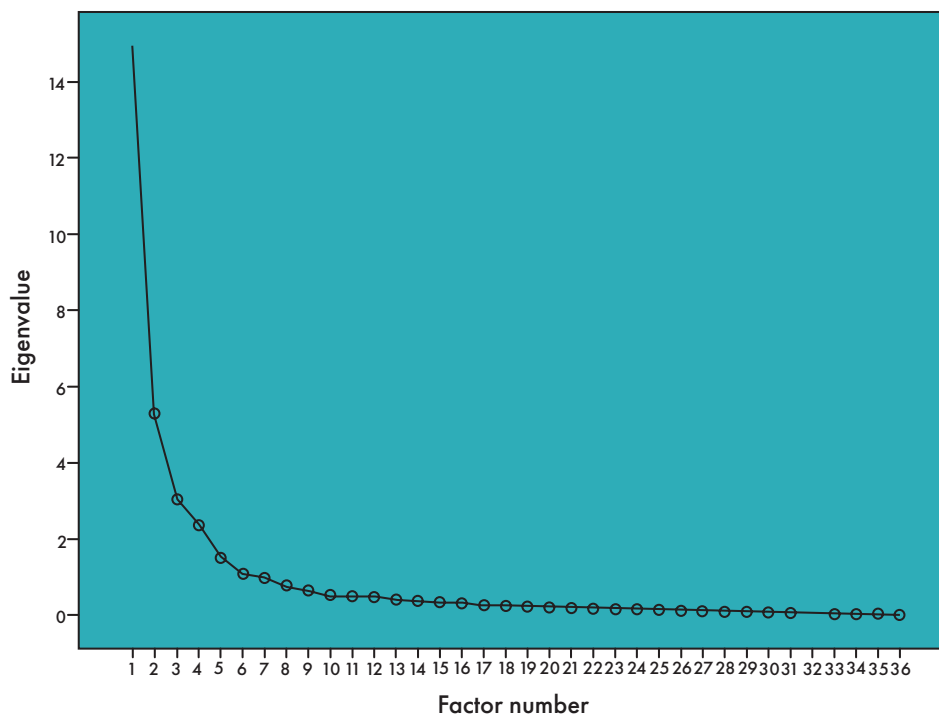
Figure 2. *Scree plot.*

inflection points at the third- and sixth-highest eigenvalues. The first three extracted factors explained 65.7% of the cumulative item variance, which is quite high for only three factors, whereas the first six explained 78.4%, a somewhat incremental increase in variance explained. The Kaiser rule (that all extracted factors should have an eigenvalue of at least 1) suggested initial retention of all six factors.

Table 1. Item loadings for the first six factors.

Item	Factor					
	1	**2**	**3**	**4**	**5**	**6**
RSA26	**1.04**	.01	-.08	-.03	-.05	.08
RSA30	**.93**	-.07	-.01	.04	-.02	.02
RSA25	**.89**	-.02	.03	-.07	-.01	.02
RSA32	**.85**	-.07	-.10	.11	-.07	.15
RSA31	**.83**	.01	.05	-.03	.08	.01
RSA27	**.82**	.09	.03	-.10	.15	.07
RSA28	**.82**	.02	-.05	-.03	.21	.06
RSA2	.13	**.97**	-.08	-.13	-.05	-.02
RSA4	.01	**.94**	-.06	-.05	.04	-.06
RSA3	.03	**.93**	.03	-.09	-.07	-.05
RSA7	.04	**.91**	.05	-.02	-.13	.01
RSA5	-.03	**.90**	.08	-.14	-.11	.04

Table 1. Item loadings for the first six factors. (Continuation).						
	Factor					
Item	**1**	**2**	**3**	**4**	**5**	**6**
RSA1	.05	**.78**	-.15	-.11	.13	-.07
RSA6	-.16	**.78**	-.04	.11	.03	.20
RSA8	-.19	**.57**	.11	.28	.17	-.04
RSA21	-.07	-.10	**.96**	.00	.10	-.03
RSA18	.05	.03	**.94**	-.09	-.10	.03
RSA22	-.11	.00	**.92**	-.05	.02	.21
RSA23	-.02	-.02	**.89**	-.02	.01	.07
RSA24	-.12	.06	**.82**	-.03	-.06	.23
RSA20	.16	-.04	**.76**	.02	.08	-.11
RSA19	.22	-.04	**.74**	-.08	.13	-.21
RSA12	-.07	-.12	-.20	**.99**	.06	.07
RSA11	-.20	-.01	-.04	**.95**	.16	.02
RSA14	.08	-.10	-.07	**.92**	-.11	-.02
RSA15	.21	.01	.02	**.77**	-.07	-.06
RSA13	.01	.00	.21	**.70**	-.08	.19
RSA33[R]	.11	-.05	.02	.00	**.67**	.03
RSA34[R]	.26	-.04	.08	.00	**.66**	.07
RSA36[R]	**.49**	.09	-.07	.02	**.55**	.10
RSA35[R]	.06	.03	.12	.01	**.44**	**.66**
RSA29[R]	.39	-.05	.19	.11	-.16	.62
RSA17[R]	.35	.13	.13	.36	-.02	-.13
RSA9[R]	.05	**.47**	.11	.36	-.10	.11
RSA10[R]	-.09	**.44**	-.03	**.42**	.16	-.09
RSA16[R]	.31	.07	.28	.29	-.12	-.29

Note. Bolded values were at or above the traditional .40 cutoff for establishing a meaningful loading on a factor. Items marked with an [R] did not achieve simple structure or were part of a factor without enough items to comprise an independent subscale and were removed from the Spanish RSA.

Table 2. Convergent validity.							
Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. RSA: Total							
2. RSA: Social Support	-						
3. RSA: Personal Competence	-	.281**					
4. RSA: Family Coherence	-	.628**	.259**				
5. RSA: Social Competence	-	.425**	.294**	.392**			
6. Resilience (Brief)	.451**	.263**	.482**	.289**	.222*		
7. Optimism	.486**	.312**	.465**	.293**	.330**	.496**	
8. Sense of Coherence	.418**	.265**	.188*	.464**	.280**	.291**	.317**

Note. **Correlation was significant at the .01 level (2-tailed). *Correlation was significant at the .05 level (2-tailed).

The item loadings for the first six factors in this EFA appear in Table 1. An item was chosen to load onto a specific factor if it achieved simple structure, which was defined as the highest loading eigenvalue exceeding an absolute value of .40, with all cross-loadings being lower than .30. The seven items that did not achieve simple structure (items 36, 35, 29, 17, 9, 10, and 16) were considered not to be a meaningful part of the factor solution and appear at the bottom of Table 2. When examining this pattern of item loadings, we found that no item loaded with simple structure on the sixth factor, suggesting the removal of that factor. On factor five, only two items loaded with simple structure (items 33 and 34), but traditionally at least three items are required for a subscale to have much reliability (indeed, Cronbach's αs can only be calculated if a subscale has at least three items). As a result, factor five was eliminated as well. The first four factors accounted for 71.3% of the cumulative item variance and for these reasons were retained.

The four-factor structure found in this EFA and the five-factor structure from the original scale[22] were very similar. Seven of the eight items from the original social support subscale loaded with simple structure onto factor one, suggesting the retention of all seven items and the designation of that factor as "social support." Item 29 ("I am quickly notified if some family members get into a crisis"), the other item in the original subscale, loaded below the .40 threshold and therefore was removed from the scale. All eight items from the original personal competence subscale loaded with simple structure onto factor two, suggesting the retention of all eight items and the designation of that factor as "personal competence." All seven items from the original family coherence subscale loaded with simple structure onto factor three, suggesting the retention of all seven items and the designation of that factor as "family coherence." Finally, five of the seven items from the original social competence subscale loaded with simple structure onto factor four, suggesting the retention of all five items and the designation of that factor as "social competence." Item 16 ("I easily laugh") and item 17 ("It is important for me to be flexible in social circumstances"), the other items in the original subscale, loaded below the .40 threshold and therefore were removed from the scale. The final 27 retained Spanish items appear in Appendix A.

Reliability and Convergent Validity

To investigate the Spanish RSA's internal consistency reliability, Cronbach's αs were calculated for each of the four retained subscales (comprised only of the retained items) and for the overall scale. Cronbach's αs for the social support subscale (.96), personal competence subscale (.95), family coherence subscale (.95), social competence subscale (.93), and the total score (.94) were all acceptably high.

In order to examine the Spanish RSA's convergent validity in dementia caregivers from Latin America, RSA total scores and subscale scores were correlated with another brief measure of resilience (BRS), a measure of optimism (LOT-R), and a measure of sense of coherence (SOC). All correlations among the RSA subscales, as well as between all RSA subscales and conceptually related variables were statistically significant, suggesting strong and consistent convergent validity (Table 2).

Discussion

The purpose of the current study was to examine the psychometric properties and factor structure of the Resilience Scale for Adults (RSA) translated into Spanish in a group of dementia caregivers from Argentina and Mexico. A confirmatory factor analysis (CFA) suggested that the factor structure found in the original RSA validation study[22] did not fit the current data well. An exploratory factor analysis (EFA) helped eliminate poorly loading items and suggested that four of the original resilience subscales (social support, personal competence, family coherence, and social competence) transferred quite well to dementia caregivers in Latin America, although the original factor of personal structure did not.

Cultural Comparison of Resilience

A likely reason that the original CFA fit poorly with the data is that personal structure did not emerge

in the EFA as a component of resilience in dementia caregivers from Latin America. The items that had comprised the personal structure factor in Friborg et al.'s[22] study (33, 34, 35, and 36) generally loaded at a much lower magnitude on their respective factor (factor five in the current study) than did the other items, as well as generally with a lack of simple structure (e.g., items 35 and 36). Although these items attained simple structure and formed a coherent factor in Friborg et al.'s[22] study with participants from Norway, personal structure may not be as important a component of resilience in dementia caregivers in Latin America. Friborg et al.'s[22] personal structure subscale included items such as "I prefer to plan my actions" and "I work best when I reach for a goal." The self-directed volition (e.g., working toward one's own goals) inherent in these items is extremely individualistic in nature and may reflect a conceptualization of resilience derived from the Western psychological or medical theories from which the RSA was developed. In contrast, Latino cultures tend to be much more collectivist in nature[43], and therefore it is perhaps not surprising that according to the EFA, this subscale may have been of lower relevance to these dementia caregivers.

Similarly, in the original validation study, personal competence was the first and largest factor, whereas in the current Latin American sample, social support was. The personal competence subscale includes items such as "I believe in my own abilities" and "Believing in myself helps me to overcome difficult times." The importance of personal individual competence in Western societies where this assessment was developed is often of paramount salience. Western cultures are predicated on the values of individuality and independence, and these values often mark the ultimate goals of rehabilitation and recovery in medical care provided within these paradigms.[41] Conversely, in Latino cultures, as in many others worldwide, interdependence and collaboration are more highly valued aspects,[43] which may explain why personal competence was not the most central component of resilience in the current sample. Indeed, social support emerged as the hallmark feature of resilience in dementia caregivers from Latin America.

Previous research has found that familism, for example, is one of the biggest Latino cultural values influencing the provision of support to other family members and particularly to those who are ill.[43-48] The current findings extend this previous research by suggesting that social support may even be the most important component of resilience in dementia caregivers from this global region.

Strengths of the Spanish RSA and Implications

The RSA showed quite high Cronbach's αs at the subscale and total score levels. This suggests that the EFA did a nice job in trimming poorly loading items and creating a scale that is internally consistent both in terms of its subscales and total score. These high αs likely contributed to the good convergent validity shown in this study with a brief measure of resilience, as well as optimism and sense of coherence. These findings suggest that the current study has produced a Spanish version of the RSA that can be extremely useful to studying resilience in dementia caregivers from Latin America in the future. Given that the caregiver experience is so closely associated with outcomes in individuals with dementia,[10] a scale that reliably and accurately assesses the various components of resilience in caregivers is critical to improving outcomes for both caregivers and those with dementia, particularly given the projected increase in individuals aged 60 and older in Latin America.[2]

From a clinical services perspective, the Spanish RSA can be administered to dementia caregivers and help provide clarity for practitioners to address in a more culturally competent and comprehensive fashion the aspects likely to be most valued in these communities, rather than imposing other values which resonate less well. For example, one intervention could be that clinicians encourage caregivers scoring low on the first RSA subscale to seek out social support or link them up with a caregiver support group. Previous research has found that high levels of social support, particularly from the family, are associated with better functioning in dementia caregivers.[40] Such an approach is more likely to build engagement, foster the therapeutic alliance, and better involve

co-constructed recommendations for treatment management bootstrapping the components of resilience shown here to be most critical in dementia caregivers from Latin America.

Limitations and Future Directions

The study has a number of limitations, which also present directions for future research. First, the limited sample size of 130 caregivers does warrant an appropriate degree of interpretational caution. Nonetheless, the degrees of freedom in the CFA were quite high, and as a result contributed to substantial power in that analysis. Further, the EFA findings generally conform to those from Friborg et al.'s[22] somewhat larger sample, lending credence to the accuracy of the current results. Second, participants were only recruited from two countries, and as a result, the findings may not be fully generalizable to dementia caregivers in other regions of Latin America or to Latino caregivers in the United States. Future research should attempt to collect data from caregivers in other regions of Latin America as well, particularly those that may be less developed than Argentina or Mexico. Third, several

other potential outcomes that may be linked to resilience in dementia caregivers were not included in the current study. Future research should assess additional constructs such as mental health or quality of care provided to individuals with dementia.

Conclusion

This study uncovered fairly fundamental differences in the construct of resilience in Latino cultures compared to that in Western cultures. Rehabilitation or medical care resonant of the western privileging of the individual experience may contrast sharply with Latino dementia caregivers' imperative of interdependence, social support, and collaborative caregiving networks. Recognizing the positive impact of social support but the limitations of personal competence may be more likely to facilitate Latino caregivers' health advancement because such an approach resonates with Latino cultural values and may be experienced as more validating than traditional western approaches. Doing so, if born out in future clinical research, could have the potential to improve outcomes for caregivers and individuals with dementia from Latin America.

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APPENDIX A. ESCALA DE RESILIENCIA PARA ADULTOS

Por favor indique que tan ciertas o no son cada una de las siguientes afirmaciones usando la siguiente escala (Nada Cierto = 1 a Muy Cierto = 7):

1. Creo en mis propias habilidades.
2. El creer en mí mismo me ayuda a superar momentos difíciles.
3. Sé que tengo éxito si sigo adelante.
4. Sé cómo alcanzar mis metas.
5. No importa lo que pase, siempre encuentro una solución.
6. Mi futuro se siente prometedor.
7. Sé que puedo resolver mis problemas personales.
8. Estoy satisfecho/a conmigo mismo/a.
R9. Tengo planes realistas para el futuro.
R10. Completamente confió en mis juicios y decisiones.
11. Soy bueno/a para ponerme en contacto con nuevas personas.
12. Fácilmente puedo establecer nuevas amistades.
13. Es fácil para mí pensar en buenos temas de conversación.
14. Es fácil para mí hacer a otras personas reír.
15. Me gusta estar con otras personas.
R16. Fácilmente me río.
R17. Es importante para mí ser flexible en situaciones sociales.
18. En mi familia tenemos vínculos fuertes.
19. Me gusta estar con mi familia.
20. En mi familia somos leales hacia los demás.
21. En mi familia nos gusta encontrar actividades comunes.
22. Aun en momentos difíciles mi familia mantiene perspectivas positivas sobre el futuro.
23. En mi familia tenemos un entendimiento común sobre lo que es importante en la vida.
24. Tenemos pocos conflictos en mi familia.
25. Tengo algunos amigos/parientes cercanos quienes realmente se preocupan de mí.
26. Tengo algunos amigos/parientes quienes me apoyan.
27. Siempre tengo a alguien quien me pueda ayudar cuando lo necesite.
28. Tengo algunos amigos/parientes cercanos quienes son buenos en animarme.
R29. Me notifican rápidamente si algún miembro de mi familia entra en crisis.
30. Puedo discutir asuntos personales con amigos/parientes.
31. Tengo algunos amigos/parientes quienes valoran mis habilidades.
32. Existen vínculos fuertes entre mis amigos.
R33. Las reglas y rutinas regulares me hacen la vida diaria más fácil.
R34. Conservo mis rutinas diarias aun en momentos difíciles.
R35. Prefiero planear mis acciones.
R36. Trabajo mejor cuando trato de alcanzar una meta.

Note. Items marked with an R should be removed prior to administration.