Many caregivers of individuals with dementia experience serious psychological distress in their role as the surrogate decision maker (SDM) (Papastavrou, Kalokerinou, Papacostas, Tsangari, & Sourtzi, 2007). Research suggests that improving caregiver self-efficacy for managing dementia reduces caregiver burden, improves reported health, and attenuates depressive symptoms (Elliott, Burgio, & DeCoster, 2010; Farran et al., 2007; Fortinsky, Kercher, & Burant, 2002; Gilliam & Steffen, 2006). However, no measure exists to assess self-efficacy for surrogate decision making. Therefore, the purpose of this study was to assess the psychometric properties of the Surrogate Decision Making Self-Efficacy Scale (SDM-SES, Lopez & Guarino, 2011).

BACKGROUND

Whether in the community or in nursing homes, caregivers of individuals with dementia experience high levels of burden and depression (Papastavrou et al., 2007). One source of burden is surrogate decision making. Family caregivers of nursing home residents with dementia are frequently called on to serve as SDMs (Givens, Kiely, Car...
Individuals with dementia may also experience negative consequences as a result of SDMs’ indecision. For both physicians and nurses, SDMs’ preferences are very strong considerations in treatment decision making for those with dementia (Cohen-Mansfield, Lipson, & Horton, 2006; Helton, van der Steen, Daaleman, Gamble, & Ribbe, 2006; Lopez, 2009a). Moreover, nurses are reluctant to implement palliative strategies if SDMs are “holding on” and seeking life-sustaining options (Lopez, 2007). Yet, patients with dementia whose SDMs have an understanding of the poor prognosis and clinical complications expected in advanced dementia are less likely to have burdensome interventions at the end of life than those without this understanding (Mitchell et al., 2009). Therefore, efforts to provide informative and emotional support to SDMs for individuals with dementia may benefit both patients and their SDMs.

THEORETICAL FRAMEWORK

Bandura’s (1989) theory of self-efficacy provided the framework for development of the SDM-SES. Self-efficacy refers to individuals’ beliefs regarding their capability to produce designated levels of performance that exercise influence over events that affect their lives. A strong sense of efficacy enhances personal well-being and enables individuals to approach threatening situations with assurance and thereby reduces stress and lowers vulnerability to depression (Bandura, 1989). The theory of self-efficacy is widely used to explain variability in family members’ ability to cope with the chronic demands of caregiving (Steffen, McKibbin, Zeiss, Gallagher-Thompson, & Bandura, 2002). Studies have suggested that improving caregiver self-efficacy for managing dementia reduces burden, improves caregivers’ reported health, and lessens depressive symptoms (Elliott et al., 2010; Farran et al., 2007; Fortinsky et al., 2002; Gilliam & Steffen, 2006).

The most widely used instrument to measure caregiver self-efficacy is the Revised Scale for Caregiver Self-Efficacy (Steffen et al., 2002). This instrument measures three domains of caregiving self-efficacy: (a) obtaining respite, (b) responding to disruptive patient behaviors, and (c) controlling upsetting thoughts. However, scales of perceived self-efficacy must be tailored to the particular domain of functioning that is the object of interest (Bandura, 2006). Currently, no instrument exists to assess self-efficacy for surrogate decision making. Definitive studies will require a psychometrically sound measure of SDMs’ self-efficacy. Therefore, the purpose of this study was to develop and assess the psychometric properties of the SDM-SES.

METHOD

Design

We used the rational-empirical approach to instrument development and testing (Burisch, 1984). The rational component refers to the use of qualitative data from an earlier study of decision making for acutely ill nursing home residents to construct the items (Lopez, 2009b). The empirical component refers to testing the items for face validity, internal consistency, and construct validity using a sample of 155 SDMs for nursing home residents with dementia.

Development of the SDM-SES

Items for the SDM-SES were drawn from a grounded theory study of how SDMs made treatment decisions for acutely ill nursing home residents (Lopez, 2009b). In that study, grounded theory methods found that the basic psychosocial problem SDMs faced was making treatment decisions in the face of uncertainty. Addi-
tional analysis of these in-depth interviews found five dimensions of self-efficacy for decision making: (a) knowing when to make decisions, (b) ability to obtain information to make informed decisions, (c) ability to weigh risks and benefits of treatment options, (d) ability to make the best treatment decisions, and (e) knowing what treatment options the individual with memory impairment would select.

The SDM-SES items are a reflection of the major themes from this qualitative work, as the dimensions were translated into items, keeping the phrasing as close as possible to the SDMs’ language and context (Figure 1). We developed one item per dimension to ensure the instrument was as concise as possible while still covering the necessary range of subject matter (Rea & Parker, 1992). Scaling was added to provide an array of choices to represent their responses. A 4-point, Likert-type format asked respondents to indicate how much they agree with each statement ranging from 1 (strongly disagree) to 4 (strongly agree). Higher scores on the SDM-SES indicate higher levels of perceived self-efficacy for surrogate decision making.

Data Collection

Face Validity. Face validity refers to the extent to which an instrument appears to measure what it purports to measure (Polit & Beck, 2008). Three experts were asked to review the five items for clarity, comprehension, and relevance. They were experts in both gerontological nursing practice and research with SDMs. Readability was assessed using the Flesch-Kincaid grade level formula. The SDM-SES was pilot tested with three SDMs. After completing the instrument, they provided feedback on clarity and comprehension.

Internal Consistency. Internal consistency refers to the degree to which the individual items in the SDM-SES measure the concept of self-efficacy for decision making (Polit & Beck, 2008). Internal consistency was assessed using Cronbach’s alpha coefficient, a reliability index that estimates the internal consistency of the items in the instrument (Polit & Beck, 2008).

Construct Validity. Construct validity refers to the degree to which the instrument measures the construct under investigation (Polit & Beck, 2008). Construct validity for the single factor was evaluated through a confirmatory factor analysis (CFA) using the Amos 19 Maximum Likelihood Program. The model was evaluated three ways. First, departure of the data from the specified model was tested for significance by using a chi-square test (Joreskog & Sorbom, 1984). Meyers, Gamst, and Guarino (2013) advised against the sole use of the chi-square value in judging the overall fit of the model because of the sensitivity of the chi-square to sample size. Second, goodness-of-fit between the data and the specified model was tested for significance by using a chi-square test (Joreskog & Sorbom, 1984). Meyers, Gamst, and Guarino (2013) advised against the sole use of the chi-square value in judging the overall fit of the model because of the sensitivity of the chi-square to sample size. Second, goodness-of-fit between the data and the specified model was estimated using the Comparative Fit Index (CFI, Bentler, 1990) and the Tucker-Lewis Index (TLI, Bentler & Bonett, 1980). Although numerous goodness-of-fit indices have been developed, we reported the CFI because it is less likely to be subject to bias when smaller samples are used (Marsh, Balla, & McDonald, 1988). Third, the items were hypothesized to achieve a factor loading of 0.45 or greater.
Sample
The sample of SDMs was drawn from eight for-profit nursing homes in New England. Nursing homes ranged in size from approximately 50 to 175 beds and were corporately owned. A member of the nursing home staff abstracted SDMs’ names and addresses from the records of nursing home residents with impaired decision making and produced mailing labels. No resident data, including identifiable health information, were collected. Surveys were mailed to all SDMs (N = 500; i.e., health care agent, power of attorney, or next of kin). The research method was also described previously (Lopez & Guarino, 2011).

The survey included a cover letter that informed potential participants of the following: (a) study purpose, (b) voluntary nature of participation, (c) nature of participation, (d) risks and benefits, and (e) measures to ensure confidentiality. We did not collect a signed version of the consent document but instead obtained implied consent. After reading the document, the participant’s response to the survey served as a de facto consent to participate. Therefore, the participant’s name could not be directly linked to their responses. Approval for the study was obtained from the appropriate Institutional Review Board.

RESULTS
A total of 155 participants returned the mailed surveys (return rate = 30%). The SDMs’ mean age was 63.77 (SD = 11.76 years). The majority of respondents (59.5%) were women, and most (95.5%) were White. One hundred thirty (83.9%) had a close family relationship (i.e., spouse, sibling, adult child) with the individual with dementia. Their religious affiliations were as follows: 39% Protestant, 40% Catholic, 10% Jewish, and 11% Other. Few (29%) had experience working in a health care-related field.

Face Validity
The agreement among the three expert gerontological nurses achieved a Fleiss’ kappa of 0.90. They reported that the instrument appeared to be a credible, accurate, and relevant measure of self-efficacy for surrogate decision making. The three SDMs who pilot tested the instrument reported that it was easy to use and the instructions were clear and readable. The Flesch-Kincaid grade level was determined to be 7.6.

Internal Consistency
Prior to analysis, all SDM-SES items were examined through various SPSS version 19 programs for accuracy of data entry, missing values, and fit between their distribution and the assumptions for analysis. The Table presents the means, standard deviations, 95% confidence intervals, and skewness for the five items. Internal consistency for this study achieved a Cronbach’s alpha coefficient of 0.87. This internal consistency suggests that the 5 items all measured the same underlying construct.

Construct Validity
Construct validity was evaluated using CFA. Although the chi-square value for the one-factor model was significant, χ²(2) = 6.85, p = 0.03, the CFI and the TLI yielded acceptably high goodness-of-fit indices (0.99 and 0.98, respectively). In addition, all items loaded statistically significantly and practically on the single-factor model, ranging from 0.63 to 0.86 (Figure 2).

DISCUSSION
In this study, we developed and tested a measure of SDM self-efficacy, the SDM-SES, using a rational-empirical approach. Qualitative data from a previously conducted study of SDMs was used to develop the instrument items.

### Table

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean (SD)</th>
<th>95% Confidence Interval</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.28 (0.58)</td>
<td>[3.19, 3.38]</td>
<td>−0.12</td>
</tr>
<tr>
<td>2</td>
<td>3.27 (0.58)</td>
<td>[3.19, 3.38]</td>
<td>−0.14</td>
</tr>
<tr>
<td>3</td>
<td>3.20 (0.60)</td>
<td>[3.11, 3.31]</td>
<td>−0.30</td>
</tr>
<tr>
<td>4</td>
<td>3.22 (0.61)</td>
<td>[3.12, 3.32]</td>
<td>0.33</td>
</tr>
<tr>
<td>5</td>
<td>3.28 (0.64)</td>
<td>[3.17, 3.38]</td>
<td>−0.32</td>
</tr>
</tbody>
</table>

Note: e = error term; Q = question.
Perceived self-efficacy is an important concept in understanding experiences and health-related outcomes of family caregivers for individuals with dementia (Fortinsky et al., 2002). Measures currently exist to assess perceived self-efficacy for managing dementia in the domains of obtaining respite, responding to disruptive patient behaviors, and controlling upsetting thoughts. However, theorists and researchers agree that self-efficacy is situation specific (Bandura, 2006). Therefore, scales of perceived self-efficacy must be tailored to the particular domain of functioning that is the object of interest.

Our study is the first to develop and test an instrument to measure self-efficacy for surrogate decision making. This instrument may be useful in studies aimed at increasing understanding of the antecedents to self-efficacy for surrogate decision making. In addition, it may be used to investigate the effect of self-efficacy on negative SDM outcomes, such as burden, guilt, and doubt. Moreover, since SDMs’ preferences are a major determinant of whether patients receive aggressive or palliative care at the end of life, this measure of SDM uncertainty may help researchers uncover the role of uncertainty on burdensome patient-centered outcomes (Cohen-Mansfield et al., 2006; Helton et al., 2006; Lopez, 2009a). Finally, the SDM-SES may be a useful assessment instrument, as well as an outcome measure, for psychosocio-behavioral interventions aimed at increasing self-efficacy for surrogate decision making.

While the preliminary psychometric testing of the SDM-SES is promising, this study was limited. We did not determine convergent and divergent validity. In addition, more research is needed to determine whether the instrument is a useful predictor of related concepts, such as decisional conflict (O’Connor, 1995) or satisfaction with end-of-life decision making (Gries, Curtis, Wall, & Engelberg, 2008). Finally, additional testing is needed in diverse populations and settings of care.

CONCLUSION

This study is the first to test a surrogate decision making self-efficacy scale. The results indicate that the SDM-SES has acceptable reliability and face validity to measure self-efficacy for surrogate decision making. Ultimately, understanding the role of self-efficacy in surrogate decision making may benefit both SDMs and individuals with dementia. The development of the SDM-SES is an important initial step in measuring self-efficacy and testing interventions to support SDMs making informed decisions for those with dementia.

REFERENCES


variables, and least squares methods. Mooresville, IN: Scientific Software.


