Social Cognition in Nursing Home Residents With and Without Cognitive Impairment

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Dementia affects the specific cognitive abilities underlying social functioning in ways that are just beginning to be understood. This pilot study compared the performances of 15 nursing home residents with cognitive impairment and 25 without cognitive impairment on a broad range of measures of social-cognitive functioning. The cognitively impaired group scored significantly lower than the unimpaired group on tests of face processing, person perception, and social reasoning but not on tests of affect recognition and the representation of social situations. Individuals’ deficits in working memory and executive function did not fully account for their impaired performance on tests of social cognition. An improved understanding and assessment of the basic cognitive mechanisms underlying the ability of persons with dementia to interact with others would inform the design of interventions to optimize their social functioning.

At present, relatively little is known about the social world of persons with dementia or about how their experience of others and their understanding of social situations change with disease progression. A number of studies have identified specific deficits in the processing of social information among those with dementia (e.g., Hargrave, Maddock, & Stone, 2002). At the same time, anecdotal evidence (Williams & Roberts, 1995; Vittoria, 1998) suggests that the ability to recognize and appropriately respond to a range of emotional expressions may be preserved well along in the disease course. An increased understanding of these social aspects of cognition in dementia is needed, for example, to develop interventions for improving relationships between caregivers and persons with Alzheimer’s disease (AD) and other dementing illnesses.

In this pilot study we compared the performances of nursing home residents with and without cognitive impairment on measures of social-cognitive functioning. Social cognition comprises a broad range of functions: facial identification, facial and vocal affect recognition, impression formation, memory for social events and people, explanation and prediction of others’ behavior, and interpersonal problem-solving (Fiske, 1993; Kunda, 1999). In an earlier article based on this study, Washburn and colleagues (Washburn, Sands, & Walton, 2003) reported that, after they controlled for age, gender, education, and standardized tests of nonsocial cognitive functioning, they found scores on measures of aspects of social cognition such as affect recognition and interpersonal problem solving to be significantly and independently associated with nurses’ ratings of nursing home residents’ social functioning. This finding suggests that measures of social cognition assess domains of competency that cannot be directly tested by measures of memory, attention, and other general cognitive abilities. Standardized measures of cognition in older adults, such as the Mini-Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975), do not directly test the abilities that underlie competent social functioning.

Studies of social cognition in dementia have largely focused on the initial stages of processing of social information, such as the discrimination of facial identity (Della Sala, Muggia, Spinmler, & Zuffi, 1995; Keane, Calder, Hodges, & Young, 2002) and the identification of emotional expressions (Cadiou & Greve, 1997; Lavenu, Pasquier, Lebert, Petit, & Van der Linden, 1999). Most of these studies have found that persons with dementia evidence impaired performance compared with normal controls. An exception is a study by Zandi and colleagues (Zandi, Cooper, & Garrison, 1992) that demonstrated comparable performances on a test of recognition of facial expressions when participants had access to the verbal labels while viewing the pictures. Similarly, Koff and colleagues (Koff, Zaitchik, Montepare, & Albert, 1999) found that, after they statistically adjusted for abstraction ability, there were no differences between patients with AD and cognitively intact controls on some of the tasks of emotion processing (e.g., videotaped scenes depicting gestures). These studies suggest that some of the difficulties that persons with dementia show in perceiving emotion appear to be secondary to the cognitive impairments associated with the disease rather than the result of a primary deficit in affect processing.

Several recent studies have investigated more complex social-cognitive abilities in dementia populations. Cuera and colleagues (2001) examined the theory of mind (ToM) in persons with dementia compared with normal controls. The term theory of mind refers to the ability to attribute independent mental states to others in order to predict and explain their behavior (Premack & Woodruff, 1978). Nearly two thirds of those with mild dementia could not pass a second-order false belief task, that is, understanding that one person has a mistaken belief about another person’s belief, whereas there were no failures in the cognitively intact older adults. Gregory and colleagues (2002) also found that participants with AD performed poorly on second-order false belief tests. These participants had little difficulty, however, with other tests of ToM, including first-order false beliefs and faux pas detection. What has not been determined is whether dementia patients’ poor performance on the second-order false belief tasks is due to memory demands rather than true deficits in ToM.
For the most part, researchers have focused on a single aspect of social-cognitive functioning in persons with dementia compared with normal controls. In the pilot study reported here, we examined a broad range of social-cognitive abilities in nursing home residents with and without cognitive impairment. At issue is whether the declines in social functioning seen in dementing illnesses are associated with specific deficits that impair some social-cognitive abilities, while sparing others, or whether there is an overall degradation in the ability to process and respond to social stimuli. We also explored whether between-group differences on tests of social cognition would remain after we statistically adjusted for performance on tests of working memory and executive function. At issue here is the extent to which memory and other nonamnestic cognitive deficits explain differences in social-cognitive functioning in persons with dementia compared with cognitively intact older adults. To our knowledge, no study has examined these relationships in a systematic way.

**Methods**

In this cross-sectional study we compared the performances of two groups of nursing home residents on tests of social cognition. Members of one group, the cognitively impaired group, either had a dementia diagnosis or evidenced mild to moderate cognitive impairment, with scores below the age-specific cutoff for a diagnosis of probable dementia (Knopman et al., 2001) on the revised Cambridge Cognitive Examination (CAMCOG-R; Roth, Huppert, Mountjoy, & Tym, 1999; van Hout et al., 2001). Members of the unimpaired group scored above the cutoff point. We adapted the tests of social cognition from existing measures that have been used to investigate social cognition in healthy adults, as well as in patients with schizophrenia, focal brain damage, or progressive dementias (Table 1). The protocol was approved by the Committee on Human Research at the University of California, San Francisco.

**Participants**

We recruited participants from a large skilled nursing facility in California. Exclusion criteria were as follows: (a) poorly controlled depressive or psychotic symptoms as noted in the medical chart; (b) poor auditory functioning (i.e., unable to hear spoken conversation) or visual functioning (unable to see text in a font size of 14 points or smaller); (c) a length of stay in the nursing facility of less than 3 months, and (d) a score of 5 or greater on the Global Deterioration Scale, with 5 suggesting moderately severe cognitive decline (Reisberg, Ferris, de Leon, & Crook, 1988). We assigned Global Deterioration Scale scores in consultation with medical and nursing staff. Of the 64 residents who were randomly selected from the pool of those eligible to participate, 22 declined. Among those who declined, the amount of time required for the assessments was cited most often as the reason for not participating. Using information available in the medical charts to compare those who declined to participate with those who were enrolled in the study, we found that, although the latter tended to be older, t(62) = -3.154, p < .05, the gender distributions were similar, χ²(1) = 1.126, ns, as was the incidence of memory impairment (φ = 0.126, ns) and depressive symptoms (φ = -0.025, ns).

**Study Procedure**

In the first session, participants completed the CAMCOG-R and tests of working memory. Research staff administered the social cognition protocol over two to three sessions, with each session lasting 1 to 2 hr. We divided the 10 social cognition measures into three groups, each including tasks of varying difficulty. We counterbalanced the order of administration of the groups of measures over the testing sessions across participants. We ensured that the individual items in each task were presented to all participants in the same order.

**Tests of Cognitive Status**

Cambridge Cognitive Examination–Revised.—The CAMCOG-R (Roth et al., 1999) comprises the 19 items of the MMSE; additional items to more thoroughly assess the functions measured by the MMSE; and items that assess abstract thinking and perception, which are not covered by the MMSE. A separate executive function score is derived from subtests not included in the CAMCOG-R total score.

Tests of working memory.—The Letter–Number Sequencing and Spatial Span Forward subtests of the Wechsler Memory Scale III (Wechsler, 1997) measure abilities to attend to information, to hold and process that information in memory, and then to formulate a response. The Letter–Number Sequencing subtest assesses working memory for information that is presented verbally; the Spatial Span Forward subtest assesses memory for information presented visually.

**Social Cognition Measures**

The social cognition battery (Table 1) comprised two measures each of the following: first, face processing, which is (a) discriminating differences between individual faces and (b) discriminating one individual from another; second, affect recognition, which is (a) discriminating one emotional expression from another and (b) identifying individual facial expressions; third, person perception, which is (a) describing psychological attributes of friends and family members and (b) making inferences about psychological attributes of unfamiliar others; fourth, representation of social situations, which is (a) identifying concrete component actions and more abstract component goals of social situations and correctly (b) sequencing component actions of situations; and fifth, social reasoning, which is (a) making inferences about another’s mental states or intentions and (b) describing and proposing a solution for a problem in a social exchange.

For all measures, a higher score indicated greater ability on the aspect of social cognition being tested. Additional information about constructing, administering, and scoring of each measure is available from the authors.

Of the 42 individuals enrolled in the study, 2 dropped out after completing just one of the three groups of social cognition measures; we did not include them in the analyses. Across 10 tests and 40 participants, 15 of 400 possible test scores were missing. Six participants had difficulty hearing the videotape used for the Assessment of Interpersonal Problem-solving Skills and could not complete the task; 1 was unable to complete the ToM measure; and 2 could not complete the
Impressions of Unfamiliar Others task. The remaining instances of missing data were due to difficulties with the audio recording equipment; scores for 3 participants completing the Impressions of Unfamiliar Others task, 2 completing the Descriptions of Familiar Others task, and 1 completing the ToM measure could not be computed for this reason.

Data Analysis
We assessed performance differences between the cognitively impaired group and the unimpaired group by using separate multivariate analysis of variance (MANOVA) models (SPSS, Version 10.0) for each of the pairs of social cognition measures. For pairs of measures showing significant group differences, we conducted two series of analyses of variance to determine the source of the differences. One series did not include covariates. The other series included as covariates the scores on Spatial Span or Letter–Number Sequencing subtests and on the CAMCOG-R Executive Function test, as appropriate, to determine whether the group differences in social-cognitive functioning were attributable to differences in working memory or in planning and sequencing (i.e., executive function). Through power analyses we determined that we

### Table 1. Social Cognition Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Task</th>
<th>Stimulus Materials</th>
<th>Question or Instruction</th>
<th>Internal Consistency</th>
<th>Test–Retest Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age Estimation (Della Sala, Muggia, Spinaker, &amp; Zuffi, 1995)</td>
<td>Discriminate differences between individual faces</td>
<td>Photos of 4 men or 4 women</td>
<td>Arrange photos in order from youngest to oldest</td>
<td>.73</td>
<td>.78</td>
</tr>
<tr>
<td>Discrimination of Facial Identity (Ekman &amp; Friesen, 1975; Roudier et al., 1998)</td>
<td>Discriminate one individual from another</td>
<td>Pairs of photos of actors expressing different emotions</td>
<td>“Is this the same person or 2 different people?”</td>
<td>.70</td>
<td>.62</td>
</tr>
<tr>
<td>Affect recognition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discrimination of Emotional Expression (Ekman &amp; Friesen, 1975; Roudier et al., 1998)</td>
<td>Discriminate one emotional expression from another</td>
<td>Pairs of photos of actors expressing different emotions</td>
<td>“Is the same emotion being expressed or are the emotions different?”</td>
<td>.73</td>
<td>.65</td>
</tr>
<tr>
<td>Identification of Emotional Expression (Ekman &amp; Friesen, 1975; Roudier et al., 1998)</td>
<td>Identify facial expressions</td>
<td>Photos of actors expressing different emotions</td>
<td>Indicate which of 6 different emotions is being expressed</td>
<td>.73</td>
<td>.59</td>
</tr>
<tr>
<td>Person perception</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Descriptions of Familiar Others (Dolen &amp; Bearison, 1982; Peevers &amp; Secord, 1973)</td>
<td>Describe psychological attributes of familiar others</td>
<td>Describe a friend or family member to convey a clear idea of what he/she is like</td>
<td>.66</td>
<td>.44</td>
<td></td>
</tr>
<tr>
<td>Impressions of Unfamiliar Others (Murphy, 1981)</td>
<td>Make inferences about the psychological attributes of strangers</td>
<td>Videotapes of individuals explaining what they would do in a given situation</td>
<td>A series of questions beginning with “What is your impression of this person?”</td>
<td>.79</td>
<td>.73</td>
</tr>
<tr>
<td>Representation of social situations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situational Feature Recognition (Bower, Black, &amp; Turner, 1979; Corrigan &amp; Green, 1993)</td>
<td>Identify component actions and goals of various social situations</td>
<td>Lists of possible actions and possible goals associated with social situations</td>
<td>Check actions associated with situation; check reasons someone would have for engaging in situation</td>
<td>.92</td>
<td>.86</td>
</tr>
<tr>
<td>Social Sequencing (Corrigan &amp; Addis, 1995)</td>
<td>Correctly sequence the component actions of social situations</td>
<td>Sets of cards representing component actions</td>
<td>Arrange cards in correct order</td>
<td>.85</td>
<td>.85</td>
</tr>
<tr>
<td>Social reasoning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theory of Mind (Happe, 1994; Happe, Brownell, &amp; Winner, 1998)</td>
<td>Make inferences about a person’s mental state or intentions</td>
<td>Short passages with main character expressing a white lie, irony, a double bluff, etc.</td>
<td>Questions requiring inferences about the main character’s mental state</td>
<td>.79</td>
<td>.79</td>
</tr>
<tr>
<td>Assessment of Interpersonal Problem-solving Skills (Donahoe et al., 1990)</td>
<td>Identify and describe a problem in a social exchange and propose a solution</td>
<td>Videotaped scenes of social exchanges with and without problems</td>
<td>A series of questions about presence of a problem, description of problem, and proposed solution</td>
<td>.77</td>
<td>.66</td>
</tr>
</tbody>
</table>

Note: For all tasks, a higher score indicated greater ability on the aspect of social cognition being tested.
could use the pilot sample size of 40 to detect moderate to large effect sizes with a power of .80 when \( \alpha = 0.05 \).

**RESULTS**

**Participant Characteristics**

Participants’ ages ranged from 73 to 97 years; three fourths of the participants were women. The median length of stay in the nursing facility was 21.5 months (\( M = 34.0, SD = 34.36 \)). Of the 40 participants, 36 (90.0%) had one or more functional limitations. Nearly one half (47.5%) were in wheelchairs; only 21 (52.5%) could ambulate unaided by equipment. Thirty-six (90.0%) of the participants had major chronic diseases or conditions, with hypertension and current major depression or dysthymia being the most prevalent.

The 25 participants who met criteria for inclusion in the unimpaired group scored significantly higher than the 15 members of the cognitively impaired group on CAMCOG-R executive function, \( t(38) = 3.46, p < .01 \), and on one of the tests of working memory, the Letter–Number Sequencing subtest, \( t(38) = 3.75, p < .01 \). As we expected, we found a statistically significant difference between the two groups on the CAMCOG-R total score, with \( t(38) = 5.36, p < .001 \). All of the individuals in the unimpaired group scored within the inter-quartile range of normative values by age group (Williams, Huppert, Matthews, Nixon, & the MRC Study, 2003). Nine individuals in the cognitively impaired group had chart documentation of a diagnosis of dementia. The mean age of the participants in the two groups was not significantly different at \( t(38) = -.750, ns \). The gender composition of the groups did not differ, \( \chi^2(1) = 0.320, ns \), and the proportion of those who had attended college or received technical training was comparable, \( \chi^2(1) = 0.178, ns \). The median length of time in the nursing home did not differ between the two groups (\( U = 169.50, ns \)). In additional analyses we compared group distributions of functional limitations and chronic diseases and conditions; we found no significant differences for any of these comparisons.

**Comparison of Group Performance on Social Cognition Measures**

The unimpaired group tended to score higher overall on the social cognition measures than did the cognitively impaired group (Table 2). Our examination of ratios of means to standard deviations revealed that, in each case, variability of performance on the social cognition measures was greater among participants in the cognitively impaired group than among those in the unimpaired group. Seven participants (46.7%) in the cognitively impaired group scored 1 SD above the mean for the unimpaired group on at least one of the measures. This was the case for one of the measures of face processing, Age Estimation (\( n = 1 \)); both measures of affect recognition, Discrimination of Facial Emotion (\( n = 3 \)) and Identification of Emotional Expression (\( n = 2 \)); both measures of person perception, Impressions of Unfamiliar Others (\( n = 1 \)) and Descriptions of Familiar Others (\( n = 1 \)); and one of the measures of representation of social situations, Social Sequencing (\( n = 1 \)).

<table>
<thead>
<tr>
<th>Measure</th>
<th>Possible Range</th>
<th>Unimpaired (n = 25)</th>
<th>Cognitively Impaired (n = 15)</th>
<th>Tests of Between-Group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M ± SD</td>
<td></td>
<td></td>
<td>Without Covariates</td>
</tr>
<tr>
<td>Face processing</td>
<td></td>
<td></td>
<td></td>
<td>Multivariate</td>
</tr>
<tr>
<td>Age Estimation</td>
<td>0–96</td>
<td>86.0 ± 7.12</td>
<td>79.6 ± 8.42</td>
<td>5.53**</td>
</tr>
<tr>
<td>Discrimination of Facial Identity</td>
<td>0–24</td>
<td>20.6 ± 2.81</td>
<td>17.7 ± 3.18</td>
<td>6.60*</td>
</tr>
<tr>
<td>Affect recognition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discrimination of Emotional Expression</td>
<td>0–24</td>
<td>19.7 ± 3.41</td>
<td>19.4 ± 3.38</td>
<td></td>
</tr>
<tr>
<td>Identification of Emotional Expression</td>
<td>0–16</td>
<td>13.4 ± 2.02</td>
<td>12.9 ± 3.24</td>
<td></td>
</tr>
<tr>
<td>Person Perception</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impressions of Unfamiliar Others</td>
<td>0–24</td>
<td>4.0 ± 1.42</td>
<td>2.7 ± 1.78</td>
<td>6.54**</td>
</tr>
<tr>
<td>Descriptions of Familiar Others</td>
<td>0–16</td>
<td>6.7 ± 3.25</td>
<td>4.2 ± 2.73</td>
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</tr>
<tr>
<td>Representation of social situations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situational Feature Recognition</td>
<td>0–16</td>
<td>14.2 ± 2.01</td>
<td>12.8 ± 1.96</td>
<td>3.20</td>
</tr>
<tr>
<td>Social Sequencing</td>
<td>0–1</td>
<td>0.78 ± 0.15</td>
<td>0.65 ± 0.19</td>
<td></td>
</tr>
<tr>
<td>Social reasoning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theory of Mind</td>
<td>0–42</td>
<td>32.4 ± 5.17</td>
<td>23.7 ± 6.46</td>
<td>12.66***</td>
</tr>
<tr>
<td>Assessment of Interpersonal Problem-solving Skills</td>
<td>0–48</td>
<td>33.0 ± 5.40</td>
<td>24.6 ± 8.49</td>
<td>25.15***</td>
</tr>
</tbody>
</table>

Notes: For all tasks, a higher scored indicates greater ability on the aspect of social cognition being tested.

*There was no upper limit to the score on this test.

Spatial Span Forward was the covariate in the analysis of the face processing measures; Letter Number Sequencing and CAMCOG-R Executive Function were covariates for person perception and social reasoning.

*p < .05; **p < .01; ***p < .001.
In separate MANOVAs, we found significant between-group differences for three of the pairs of related social cognition measures: face processing, $F(2, 37) = 5.53, p < .01$, person perception, $F(2, 30) = 6.54, p < .01$, and social reasoning, $F(2, 30) = 12.66, p < .001$. Post hoc analyses of variance revealed statistically significant between-group differences for both measures in all three MANOVAs: the two face-processing measures, that is, Age Estimation, $F(1, 38) = 6.60, p < .05$, and Discrimination of Facial Identity, $F(1, 38) = 9.25, p < .01$; the measures of person perception, that is, Impressions of Unfamiliar Others, $F(1, 31) = 9.98, p < .01$, and Descriptions of Familiar Others, $F(1, 31) = 5.28, p < .05$; and the two measures of social reasoning, that is, ToM, $F(1, 31) = 25.15, p < .001$, and assessment of Interpersonal Problem-solving Skills, $F(1, 31) = 11.88, p < .01$. The performances of the two groups did not differ for the remaining pairs of measures, that is, affect recognition, $F(2, 37) = .18$, $p > .05$, and representation of social situations, $F(2, 34) = 3.20, p > .05$.

We included scores on the Spatial Span Forward subtest, one of the tests of working memory, as covariates in our multivariate analyses of covariance (MANCOVAs) of the predominantly perceptual measures of face processing. Significant group differences remained for this pair of measures: $F(2, 36) = 4.01, p < .05$. In univariate analyses, we found significant between-group differences for both Age Estimation, $F(1, 37) = 4.23, p < .05$, and Discrimination of Facial Identity, $F(1, 37) = 6.81, p < .05$, after we controlled for performance on the working memory task.

Scores on the Letter–Number Sequencing subtest, the other test of working memory, and on the CAMCOG-R Executive Function subtest were covariates in separate MANCOVAs of the person perception and social reasoning measures. We found no between-group difference for the person perception measures after we controlled for working memory and executive function: $F(2, 26) = 1.98, p > .05$. At $F(2, 27) = 3.74, p < .05$, the MANCOVA for the social reasoning measures showed a significant difference between the two groups. In the univariate tests, a significant between-group difference remained for ToM, $F(1, 28) = 7.61, p < .01$, but not for Assessment of Interpersonal Problem-solving Skills, $F(1, 28) = 1.29, p > .05$, after we controlled for performance on the tests of working memory and executive function.

**Discussion**

Dementia affects the specific cognitive abilities underlying social functioning in ways that are just beginning to be understood. Here we compared the performances of nursing home residents with and without cognitive impairment on measures of face processing, affect recognition, person perception, the representation of social situations, and social reasoning. Other investigations of social cognition in persons with dementia have used some of the same, or similar, measures, but this study is the first to our knowledge to test a range of social-cognitive functioning in this population.

We discovered that, for three of the measures in which we found significant between-group differences, there were individuals from the cognitively impaired group whose scores exceeded the mean plus the standard deviation for the unimpaired group. These results support the findings of several descriptive studies that some persons with dementia continue to engage socially with others and are able to maintain personal relationships (Williams & Roberts, 1995; Vittoria, 1998).

A goal for future research is to develop a formal test battery for use in determining for individual dementia patients which social-cognitive abilities are spared and which are impaired.

In this study we also found that impairments in aspects of cognition measured by widely used, standardized tests may not completely account for the deficits in performance on tests of social cognition. Other studies have shown that scores on tasks that assess social or emotional intelligence are not strongly predicted, for example, by verbal or performance IQ (see Sternberg, Wagner, Williams, & Horvath, 1995 for a review). In this study we included just two covariates—working memory and executive function—of what might be termed non-social cognition; we used the test of general cognitive status, the CAMCOG-R, to categorize participants into the two study groups. Further research is needed to determine which aspects of social-cognitive functioning are specific to the perception and understanding of social stimuli and which are attributable to nonsocial cognition.

In an earlier report (Washburn et al., 2003), the measures used here were shown to have good internal and test–retest reliability. In addition, tests of affect recognition and social reasoning were found to be significantly and independently associated with nurses’ ratings of residents’ social functioning after age, gender, education, and standardized tests of cognitive functioning were controlled for. This finding suggests that measures of social cognition assess domains of competency that cannot be directly tested by measures of memory, attention, and other general cognitive abilities.

The small sample size of this pilot study likely reduced the power to detect significant differences in performance between the cognitively impaired and cognitively unimpaired groups. We found nonsignificant differences for affect recognition and representation of social situations. Lack of power, however, may have affected only the tests of representation of social situations, because the group means for the tests of affect recognition were nearly identical.

In addition to small sample size, a limitation of this study is that all participants were Caucasian. It is important that future studies consider the possible effects of culture and ethnicity on social cognition in older adults (Kitayama, 2000). Another limitation is that formal diagnoses were unavailable for many of the participants with cognitive impairment. In fact, facilities that care for frail older adults, including assisted living facilities and adult day care centers, typically do not require and, therefore, do not have formal diagnoses for those with impaired cognitive functioning. Thus, whereas the findings from this study cannot be used to predict patterns of spared and impaired social-cognitive abilities for specific dementia types, they could be considered relevant to a broad class of persons with dementia. A focus of future research should be to determine the effects of various dementing illnesses on a range of social-cognitive functioning.

With the exception of the tests of representation of social situations, the focus of the battery of measures used in the study is the perception of others. Certainly, social-cognitive abilities that underlie the perception of self or of self in relation to others are also important to older adults’ social functioning. Further, in frail
older adults, additional factors likely influence competence in social situations: chronic medical burden, mood state, the general social environment, and, in dementia patients, the premorbid level of social functioning. Future investigations will begin to explore the interrelationships of the many factors that affect how older adults perceive and understand their social worlds.

There is a compelling need to continue to explore social cognition in older persons who live in nursing homes, as well as in other types of congregate housing such as assisted living facilities, because their social functioning influences their well-being and the well-being of those with whom they live. For those living more independently in the community, competent social functioning is also important. Formal assessment of social-cognitive functioning in older adults with dementia would help identify limitations in their ability to perceive and understand others and help address some of the problems that place them at risk for social isolation and that can contribute to difficulties experienced by caregivers.

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