ABSTRACT: Purpose: Older adults are frequent consumers of health care services. However, reports have indicated that breakdowns in communication during provider–patient interactions may contribute to poor health outcomes in this population. The purpose of this study was to examine whether the pragmatic skills used by older adults in social contexts were related to the communication skills they used in health care contexts.

Method: Sixty-three older adults ranging from 63 to 93 years of age were administered the Social Communication subtest of the Functional Assessment of Communication Skills for Adults (FACS; Frattali, Thompson, Holland, Wohl, & Ferketic, 1995) along with the Healthcare Communication Profile (Hester, 2006), which is a self-report measure of communication skills within the health care setting. In addition, a narrative was collected from each participant. Correlation and stepwise multiple regression procedures were completed to determine relationships between the use of pragmatic skills in the two settings.

Results: Results indicated significant relationships between pragmatic skills used in social communication settings and pragmatic skills used in health care settings.

Conclusion: The pragmatic skills used by older adults in social communication settings are related to the pragmatic skills they used in health care settings.

KEY WORDS: health literacy, assessment, adults, pragmatics
oral language and social communication have been related to literacy skills in academic settings (Brinton & Fujiki, 2004; Donahue & Foster, 2004; Rowe, 1989), it seems plausible that the same theoretical concept could be applied to health literacy in adults, hypothesizing that social communication skills facilitate health literacy via health care communication skills (Hester, 2009).

Successful health care communication skills involve active engagement in health management through asking questions, explaining symptoms, and discussing health concerns (Cooper & Roter, 2003; Hester & Stevens-Ratchford, 2009; IOM, 2004; Street, 2003). Patients who are active participants in their health care have been found to receive a greater amount of information, adhere to treatment regimens, achieve positive health outcomes, and be more satisfied with their health care than patients who are not active participants (Cooper & Roter, 2003; Mika, Kelly, Price, Franquiz, & Villarreal, 2005; Street, 2003; Tran et al., 2004).

Pragmatic or social communication skills are perhaps among the most crucial skills for health literacy as individuals need to engage in effective discourse with providers. In its broadest sense, pragmatics is defined as “how language is used in the process of communication” (Müller, 2000, p. 9). Health literacy has been linked to patient empowerment during the health care encounter (Tones, 2002). Likewise, pragmatic communication skills have been noted to empower people (Harris, 1995) through speech acts that allow a person to negotiate, inform, and question during discourse. Speech acts are a crucial part of conversation, narration, and storytelling, though the structure and function of these acts vary greatly. Speech acts allow the speaker to maintain power and control within the environment in order to achieve his or her goals (Bruner, 1983; Harris, 1995).

Speech acts associated with narratives, storytelling, and monologues take on a different set of rules than those needed to be successful throughout conversational exchanges (Haynes & Shulman, 1998). These rule changes are due to the extended period of time that the speaker is expected to talk without the listener interacting and his or her ability to stay focused on the topic, create sentences that contain all speech act principals, and use proper language format for the context (Haynes & Shulman, 1998). A narrative is the “verbal recapitulation of past experiences or the retelling of ‘what happened’” (Ukrainetz, 2006, p. 196). Narratives are used to report on, evaluate, and organize experiences as well as enable individuals to feel emotionally involved. Narratives encompass much of an individual’s daily discourse and components in provider–patient interactions (Street, 2003; Ukrainetz, 2006). According to the IOM (2004), health care encounters involve a dialogue between patient and provider in which the patient tells his or her stories, describes his or her experiences, and provides explanations to obtain help with his or her health concerns. Health narratives are stories that describe the patient’s health. They consist of everyday activities, relationships, situations, and chronological sequencing of health events (Street, 2003). Such narratives provide important information about the patient’s health behavior, beliefs, and perceptions of well-being and are important in attaining adequate health care services (Street, 2003).

Therefore, the purpose of the present study was to examine the relationship between communication skills in social and health care contexts in older adults—a population that has been identified as having both low health literacy and inadequate communication skills within the health care setting (Baker et al., 2002; Benson & Forman, 2002; Cooper & Roter, 2003; Dearborn et al., 2006; IOM, 2004; Kaiken, Shapiro, & Gayle, 2001; Street, 2003).

PRAGMATIC SKILLS OF OLDER ADULTS

Increased age is one factor that has been associated with decreased language and communication skills (Duong & Ska, 2001; Juncos-Rabadan, Pereiro, & Rodriguez, 2005; Le Dorze & Bedard, 1998; Sorrel, 2006). Studies on aging have indicated that as adults age, they demonstrate changes in social communication (pragmatics), word retrieval, sentence use, memory, comprehension, hearing, and reading skills (Baker et al., 2002; Benson & Forman, 2002; Bopp & Verhaeghen, 2005; Cronin & Mandich, 2005; Drummond, Dancer, & Pierce, 1996; O’Hanlon, Kemper, & Wilcox, 2005). Studies focusing specifically on the pragmatic discourse skills of older adults indicate changes in an individual’s comprehension and production of communication over the life span (Drummond et al., 1996; Shadden, 1997; Ulatoska, Hayashi, Cannito, & Fleming, 1986).

Drummond et al. (1996) conducted a study based on three narrative discourse tasks and found that the pragmatic abilities of older study participants (70 to 79 years of age) were marked by more ellipses and greater referencing errors (i.e., proper nouns, stipulated noun phrases, members of a class) than those of younger participants (20 to 29 years of age). A related study by Ulatoska et al. (1986) examined referencing errors of older adults throughout multiple discourse tasks. Ambiguity of referencing was noted in the younger elderly (64–75 years of age); however, it increased in the older elderly population (77 to 92 years of age) with increased complexity of the narrative (Ulatoska et al., 1986). When comparisons were made between older-old, younger-old, and younger participants, results indicated that older-old participants provided less information in discourse, less setting information, and reduced relevance of information in complex and open-ended discourse conditions (Shadden, 1997; Ulatoska et al., 1986). In conversation, older adults demonstrated less questioning and requests for elaboration along with reduced spontaneous language and fragmented sentences (Ardila & Rosselli, 1996; Shadden, 1997). These findings suggest a life span continuum of referential decline within the normal elderly population (Ulatowska et al., 1986). Conceivably, age-related changes in pragmatic abilities can impact provider–patient interactions with older adults.

Provider–Patient Interactions With Older Adults

For a communication exchange to be successful, provider–patient interactions must be mutually comprehended.
However, reports indicate that providers often use close-ended questions, speak at a fast rate, and dominate conversations (Street, 2003). This structure leaves little time for information to be verified and patient concerns to be addressed (Safeer & Keenan, 2005; Street, 2003). Reports of health care interactions with older adults have consistently noted breakdowns in provider–patient communication and have suggested that more than one-third of older patients do not initiate necessary medical discussions with providers, even though they often do not understand technical terms and the complexity of health-related content and have inadequate confirmation of their understanding (Institute for Healthcare Advancement, 2005; Thompson, Robinson & Beisecker, 2004).

Limited comprehension, topic maintenance problems, and decreased information-seeking skills have been reported for older adults (Beers et al., 2003; Georges, Bolton, & Bennett, 2004; Kaakinen et al., 2001; Kreps, 2006; Thompson et al., 2004). These problems can disrupt the communication exchange of provider–patient interactions and may be related to high levels of arousal, including nervousness and anxiety regarding being perceived as less capable (Thompson et al., 2004; Tran et al., 2004). Older patients may have decreased organization, more verbal disfluencies, and greater amounts of pauses that disrupt the topic flow. Taken together, these communication problems may lead to older patients avoiding interactions when they are provided with a choice (Burleson & Planap, 2000; Street, 2003).

Thus, older patients have been reported to be less participatory in both asking questions and informing physicians of their health concerns (Adelman, Greene & Charon, 1991; Cooper & Roter, 2003; Nussbaum, Pecchioni & Crowell, 2001; Thompson et al., 2004). Tran et al. (2004) conducted forums to teach patients how to talk to their doctor and found that many patients indicated that they were afraid they would be seen as “stupid” if they asked too many questions. Furthermore, many older patients do not inform their physicians of important medical problems they experience, resulting in incomplete diagnosis and treatment (Thompson et al., 2004). Patients who play an active role in their health care by asking questions and discussing their health concerns receive more information and are more satisfied with their health care (Cooper & Roter, 2003; Street, 2003). Consequently, these patients have been reported to feel more in control, and they have better disease management than those patients who are passive (Street, 2003).

According to Kaplan, Greenfield, Gandek, Rogers, and Ware (1996), patients 75 and older reported significantly less participatory visits than did all of the younger age groups in their study (as cited in Cooper & Roter, 2003). Studies of health literacy with older adults have generally reported low health literacy as assessed by reading and writing tasks (Davis et al., 1993). Findings have indicated that older adults have difficulty completing informed consent documents, determining when appointments should be scheduled and prescriptions refilled, and reading basic health-related materials (Baker, Williams, Parker, Gazmaraian, & Nurss, 1999; Benson & Forman, 2002; Gordon, Hampson, Capell, & Madhok, 2002; Williams et al., 1995). The observation that many patients do not understand concepts provided in written materials places a greater demand on the effectiveness of oral communication (i.e., provider–patient interaction) to ensure that an understanding of the information is attained. However, research has shown that patients with poor health status, older patients, patients with less than a high school education, and male patients rate health care visits as less participatory (Cooper & Roter, 2003). Reports of gender differences note that older male patients, in particular, play a less active role in their health care by asking fewer questions and being less engaged during the medical process (Cooper & Roter, 2003; Govender & Penn-Kekana, 2008; Thompson et al., 2004).

The Present Study

Although studies have noted problems with pragmatic communication and provider–patient interactions, no studies have systematically examined how the pragmatic skills older adults use in social settings may be related to the pragmatic skills they use in health care settings. Information on the relationship between social communication and communication skills used in health care contexts is important for (a) understanding how social communication skills may facilitate the use of health care communication skills, (b) providing information on discrepancies noted in clients’ abilities to use adequate pragmatic skills in social versus health care contexts, and (c) providing a model for examining health care communication skills of individuals with communication disorders.

The present study is a first step in examining social communication skills within a health literacy context using a sample of community-dwelling older adults. The study focused on the relationship between pragmatic functions or speech acts used by older adults in social communication, narratives, and health care communication contexts. The following research questions were posed:

- What is the strength of the relationship between pragmatic skills used in social communication, narratives, and health care communication contexts?
- Are there pragmatic skills that are used in social communication that are predictors of pragmatic skills used in health care communication?
- What is the influence of age, gender, race, education, and health status on an individual’s health care communication skills?

METHOD

Participants

Sixty-five older adults were recruited voluntarily from senior centers and churches with the consent of administrators. Volunteers were screened for inclusion in the study using the Mini-Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975) and an informal reading assessment (Shipley & McAfee, 2004). The MMSE was conducted as a screening for cognitive and language impairments. A score of 24 or higher was considered passing, consistent
with the test cutoff scores. A brief informal reading screening was administered that involved silent reading of a 56-word paragraph and answering five oral comprehension questions to determine functional reading skills (Shipley & McAfee, 2004). This screening was used to ensure that nonreaders were not selected as participants as reading was required to complete the Healthcare Communication Profile (HCCP; Hester, 2006). Sixty-three of the 65 volunteers met screening criteria of correctly answering at least four of the five oral comprehension questions and were selected as participants in the study. Selected participants ranged in age from 63 to 93, with a mean age of 75 (Table 1). All participants were native speakers of English, and most participants were retired (n = 50). All of the participants resided independently in community senior citizen complexes or individual houses in Maryland and Pennsylvania. Additionally, the self-reported health status of participants ranged from no significant health conditions (n = 50) to one or more medical diagnoses (n = 13), which included history of stroke, heart disease, neurological deficits, depression, and speech problems.

Assessments

Pragmatics/social communication. The Social Communication (SC) subtest of the Functional Assessment of Communication Skills for Adults (FACS; Frattali, Thompson, Holland, Wohl, & Fer ketic, 1995) was administered to assess participants’ functional social communication skills. Although this subtest was standardized on individuals with aphasia and traumatic brain injury, it was not used as a diagnostic tool in the present study but rather as an assessment of participants’ social communication skills. Good reliability as an assessment of social communication skills has been reported for the subtest (r = .90). To determine the reliability of the subtest for the present study, split-half reliability procedures with Spearman Brown adjustment were completed on participants’ scores. The results indicated good reliability (r = .76) of the SC subtest for the purpose of the study.

The SC subtest assesses pragmatic skills involving giving information, responding, agreeing, disagreeing, initiating, questioning, requesting, explaining, understanding figurative language and nonverbal language, and maintaining topic by engaging individuals in conversation (Frattali et al., 1995). The SC subtest includes ratings of independence in social communication contexts and level of effectiveness (i.e., adequacy, appropriateness, promptness, and level of communication sharing; Frattali et al., 1995). Consisting of 21 items, the SC subtest provides quantitative data on an individual’s level of communication independence. Independence levels are gained by scoring responses based on the individual’s need for assistance and/or prompting on a 7-point scale (1 = never to 5 = always). Examples of items on the FACS–SC are “requests information from others,” “explains how to do something,” “initiates conversation,” and “expresses agreement and disagreement.” On completion of all 21 items of the SC subtest, a communication independence mean score can be derived by adding the rating for each item and dividing the total score by the number of items.

An oral narrative was also elicited from participants to assess their organization and elaboration of ideas, topic maintenance, and thematic development using a picture from the Peabody Language Development Story Card, Accident Scene: The Injured Paper Boy (Dunn & Smith, 1967). The picture depicted a paperboy who was hit by a car while riding his bike. The injured boy was lying in the middle of the street, surrounded by people and an ambulance.

Health care communication. The HCCP was administered to assess participants’ health care communication skills. Speech acts on the HCCP include expressing opinions, informing, understanding, clarifying, explaining, questioning, suggesting, disagreeing, and initiating communication. This tool is a 14-item self-report assessment requiring individuals to rate the frequency with which they use specific pragmatic speech acts during health care visits on a 5-point scale (1 = never to 5 = always). Examples of items on the HCCP are “I ask my doctor questions about my health condition,” “I understand my doctor’s explanation concerning my health condition,” and “I ask my doctor to explain terms that I don’t understand.”

Self-report measures have been deemed reliable and realistic measures for obtaining information about individuals’ routine behaviors and have been used in health communication and the field of communication disorders (Brody, Miller, Lerman, Smith, & Caputo, 1989; Pollard, Ellis, Finan, & Ramig, 2009; Schorr, Roth, & Fox, 2009). Preliminary validation of the tool was obtained with 32 older adults ranging from 60 to 82 years of age with good internal consistency noted (Cronbach alpha = .89). Concurrent validity with the Short Test of Functional Health Literacy (S–TOFHL; Baker et al., 1999) was also determined to be good, yielding a coefficient of r = .91. Reliability procedures were completed on participants’ scores for the present study and yielded an alpha of .81, indicating good reliability for the purpose of the study.

Procedure

Sessions averaged 1 hr and were administered by one of the authors individually in a quiet room with consistent

Table 1. Description of study participants.

<table>
<thead>
<tr>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
</tr>
<tr>
<td>63–93</td>
</tr>
</tbody>
</table>

| Gender (n) |
| Female | Male |
| 48 | 15 |

| Race (n) |
| Caucasian | African American |
| 50 | 13 |

| Education (years) |
| Range | M |
| 6–20 | 14 |
order of stimulus presentation for each participant. The participants were first asked to complete the HCCP. They were instructed to read each question and rate the frequency with which they used a given speech act during health care encounters based on a 5-point scale (1 = never to 5 = always).

Second, the FACS–SC was administered, in which one of the investigators engaged the participant in conversation. To examine participants’ ability to understand facial expressions, three pictures of individuals depicting emotional expressions of happiness, anger, and sadness were presented. The pictures were taken from *Super Duper Publications* (2000). The participants were asked to label the emotion depicted in the picture (i.e., happy, sad, or angry). To determine participants’ understanding of emotional vocal tones, a prerecorded audiotape was played of a speaker stating the same sentence using three different vocal tones (i.e., “My mother went to the store today.”). The participants were asked to label the emotion portrayed by the speaker by pointing to the corresponding pictures used previously (i.e., happy, sad, and angry). The audiotape was used to maintain consistency in presentation of the vocal tones.

The final measure assessed participants’ ability to formulate a narrative based on a self-generated story cued by a picture. Each individual viewed the same picture stimulus of an accident scene in which a boy was hit by a car. Participants were then instructed to make up a complete story about the picture beginning with the story starter “One day….” All narratives were tape recorded and later transcribed. Each narrative was rated based on a story grammar analysis using narrative maturity levels. The story grammar maturity levels progress from Level 1 (isolated descriptions) to Level 7 (multiple episodes). These narrative maturity levels were developed by Nelson, Bahr, and Van Meter (2004) based on information in the literature (see the Appendix for further descriptions of story grammar maturity levels). This rating scale allowed for a quick and efficient examination of narrative skills across participants.

**Interrater Reliability and Data Analysis**

Interrater agreement was obtained for transcription and coding of the narratives. Fifty percent of the audiotapes were transcribed by the second author following initial transcription by the first author and a student research assistant. Interrater agreement for word-to-word transcription was 97%. Coding of narratives was completed by both authors, yielding 98% agreement. Differences were determined by consensus of the two authors. Interrater agreement was also conducted for calculating scores on the FACS–SC and the HCCP, in which 50% of the assessments were rescored by the second author, yielding 100% agreement.

To determine relationships between pragmatic skills used in social communication and health care communication, Pearson product–moment $r$ correlations were completed on items from the FACS–SC subtest, the HCCP, and the narrative scores. Stepwise multiple regression analyses were used to identify social communication skills that may be predictors of health care communication skills and to identify any influence of the independent variables of age, gender, and health status. The alpha was set at the .05 level for all statistical procedures.

**RESULTS**

**Descriptive Findings**

Table 2 provides information on group means for the assessment procedures. As shown, the various age groups obtained similar ratings for social communication and health care communication skills. The results indicate that all groups demonstrated near maximum performance for social communication skills (1 minimum – 7 maximum) and modest performance for health care communication skills (1 minimum – 5 maximum). Thus, the findings reflect that the participants, in general, were independent in using pragmatic skills within a social context (mean ratings ranged from 6.92 to 7.00 = independent or does with minimal assistance), but sometimes used these skills in a health care context (mean ratings ranged from 3.32 to 3.90). Narrative scores ranged from 2.83 to 3.33. Statistical analysis of the assessment scores indicated no significant group differences, so the data were collapsed.

**Association Between Social Communication and Health Care Communication**

The first research question concerned the relationship between pragmatic skills used in social communication contexts and those used in health care communication contexts. Pearson product–moment $r$ correlations were completed on scores from the FACS–SC and the HCCP to examine the relationship between pragmatic skills used in social communication and health care communication, yielding 98% agreement. Differences were determined by consensus of the two authors. Interrater agreement was also conducted for calculating scores on the FACS–SC and the HCCP, in which 50% of the assessments were rescored by the second author, yielding 100% agreement.

**Table 2.** Study participants’ group means (and standard deviations) for the assessment measures.

<table>
<thead>
<tr>
<th>Age group in years</th>
<th>N</th>
<th>Mean education</th>
<th>Health conditions</th>
<th>Males</th>
<th>Females</th>
<th>FACS-SC</th>
<th>HCCP</th>
<th>Narrative</th>
</tr>
</thead>
<tbody>
<tr>
<td>63–72</td>
<td>27</td>
<td>13</td>
<td>11</td>
<td>9</td>
<td>18</td>
<td>7.00 (.00)</td>
<td>3.90 (.14)</td>
<td>3.00 (1.5)</td>
</tr>
<tr>
<td>73–82</td>
<td>25</td>
<td>14</td>
<td>6</td>
<td>6</td>
<td>22</td>
<td>6.97 (.05)</td>
<td>3.73 (.78)</td>
<td>3.33 (.57)</td>
</tr>
<tr>
<td>83–93</td>
<td>9</td>
<td>14</td>
<td>6</td>
<td>0</td>
<td>8</td>
<td>6.92 (.25)</td>
<td>3.32 (.96)</td>
<td>2.83 (1.3)</td>
</tr>
</tbody>
</table>

*Note.* FACS-SC = Social Communication subtest of the Functional Assessment of Communication Skills (Frattali et al., 1995), HCCP = Healthcare Communication Profile (Hester, 2006).
contexts (SC) and those used in health care contexts (HCCP). Results indicated several significant correlations, suggesting up to moderate relationships between variables. These findings were interpreted according to guidelines offered by Cohen (1988), which indicate the following: 0–.29 = small correlation, .30–.49 = medium, and .50–1.00 = large correlation. Table 3 summarizes the findings. As shown, findings indicate a small but significant correlation between scores on the FACS–SC and the HCCP ($r = .27$, $p < .05$). In addition, significant correlations emerged for the HCCP items of inform, initiate, and question and the FACS-SC items of explain, vocal tone, facial expression, and understanding television. Significant correlations also emerged for the FACS–SC total mean and the HCCP items of disagree, giving opinions, and informing.

### Predictors of Health Care Communication Skills

The second research question probed whether pragmatic skills used in social communication were predictors of pragmatic skills used in health care communication, as reported on the HCCP. To examine this issue, a series of stepwise multiple regression analyses were completed with mean scores and specific items on the SC subtest, HCCP, and narratives. Although no predictors of health care communication skills emerged from the SC subtest, results of the analysis indicated that the narrative was a predictor of the HCCP item of inform, $R^2 = .138$, $\beta = .371$, $F(1, 29) = 4.637$, $p < .05$. The results indicate that the participants’ production of more complex narratives was associated with their self-reports of higher frequency of informing physicians of health concerns. The narrative accounted for 13% of the variance for informing. According to interpretations in the literature, moderate variance begins at the 9% level, whereas large variance is ≥ 25% (Cohen, 1988; Cohen, Cohen, West, & Aiken, 2003).

### Influence of Background Variables

To further examine the influence of the independent variables on an individual’s health care communication skills (the third research question), individual items from the HCCP were entered into a series of stepwise multiple regression analyses with each of the four independent variables of age, gender, education, and health status. Health status emerged as a significant predictor of health care communication skills in two areas. First, a positive relationship was found between health status and health care communication skills in general, $R^2 = .148$, $\beta = .372$, $F(1, 49) = 8.514$, $p < .00$. These findings showed that health status accounted for 14% of the variance for HCCP total score. Second, a negative relationship was found between health status and the specific health care communication skill of questioning, $R^2 = .136$, $F(1, 51) = 7.943$, $p < .12$, $\beta = -.369$. Another significant finding was that age was a predictor of the understanding health information item on the HCCP, $R^2 = .159$, $F(1, 51) = 8.764$, $p < .05$, $\beta = .399$. No predictive value emerged for gender, education, or race.

### DISCUSSION

The present study was designed to examine the relationship between communication skills and health literacy in older adults through comparison of pragmatic skills used in social communication and health care contexts. The motivation for analyzing these relationships originated from a growing emphasis on the importance of communication skills in the attainment of adequate health care (IOM, 2004; Kreps, 2006). This study was a first step in examining how social communication skills may provide a foundation for health literacy with regard to communication within the health care context. Thus, the preliminary findings from the study add information to the existing literature in several ways.

### Pragmatic Skills and Health Care Communication

A major finding from this study is that there is a moderate relationship between pragmatic skills used in social communication contexts and those used in health care communication contexts. This finding suggests that the social communication skills used by older adults may be related to their ability to communicate with their health care provider. One example is that relationships were found between the FACS–SC score and the HCCP verbal items of disagree, express opinion, and inform. This finding is consistent with previous findings discussed, suggesting that the overall pragmatic skills used in social communication contexts may play an important role in one’s pragmatic skills used in the health care encounter. When an older adult presents with strong social communication skills, he or she may be more inclined to disagree, as well as provide information and opinions, than older adults with weaker social communication skills. Thus, older adults with stronger social communication skills may gain greater benefit from their health care encounter than those with weaker skills. This interpretation is consistent with previous reports of the benefits of patients’ participation in their health care. Reports indicate that the patient’s communicative behavior influences the physician’s responses (Cooper & Roter, 2003; Tran et al., 2004). Patients who
actively engage in their health care by questioning, providing information on health concerns, and expressing their opinions feel more in control and have better disease management than patients who are passive (Cooper & Roter, 2003; Mika et al., 2005; Street, 2003; Tran et al., 2004).

Second, findings indicate a positive relationship between understanding vocal tones and facial expressions and initiating communication in the health care setting. Approximately 60% of the meaning in social interactions is communicated nonverbally, and most communication acts carry a set of nonverbal components (i.e., facial expression, gestures, eye contact, vocal behaviors; Burgoon, Buller, & Woodall, 1994). Moreover, nonverbal cues are typically believed when there is a conflict with verbal messages (Burgoon & Bacue, 2003). An individual’s use of facial expressions can aid in the meaning of a message being conveyed, and changing characteristics of vocal tone such as intonation, loudness, or stress can modify the social meaning of a sentence (Nelson et al., 2004). All of these nonverbal components play an especially important role in the initial encounter of individuals by influencing the length, tone, and quality of an interaction (Rigglio, 1992).

The ability to encode and decode nonverbal communication exchanges successfully may have an effect on provider–patient interactions during the health care encounter. For instance, if a patient perceives the nonverbal messages (vocal tone and facial expression) of the provider as positive, this may create a climate where the patient is more willing to initiate communication regarding his or her health care. When a patient has a negative perception regarding the provider’s nonverbal behaviors, the outcome may be the opposite reaction. These perceptions may result in the decreased likelihood that the patient will share information with the provider and take an active role in his or her health care planning.

Previous studies regarding provider–patient interactions have indicated that patients often worry that they may be considered to be “ignorant” or “stupid” by their physician when asking questions or providing their opinion regarding their health care (Tran et al., 2004). In addition, Greene and Adelman (2001) found that the interactional processes and the global tone of the physician in the first visit are strong predictors of the physician–patient interactions in subsequent visits. Therefore, if an individual perceives the provider’s vocal tone and facial expressions as negative, such as condescending or uninterested, combined with existing fears of being viewed as unintelligent, increased hesitancy to initiate communication regarding health concerns may result. Likewise, studies have indicated that the patient’s affect impacts physician–patient interactions and the length of patient visits (Cooper & Roter, 2003).

Third, the narrative production task was a significant predictor of informing on the HCCP. This result indicates that skills needed to comprise a narrative are imperative to success in both daily life and health care encounters. In daily encounters, narratives take on a dynamic interaction between a sender and a receiver wherein an individual must organize knowledge and experience to convey a message pertaining to a present circumstance (Ukrainetz, 2006). Health narratives are important components in a patient’s care because they provide information regarding the patient’s health status as it impacts his or her activities of daily living, as well as a chronological account of health events (IOM, 2004; Street, 2003). The present findings suggest that older adults who exhibit strong narrative skills in social communication contexts would be more likely to provide information regarding their health during health care encounters. These older adults may not only be more proficient at formulating a narrative, but may also demonstrate a greater ability to coordinate their responses with the provider to create a smooth exchange of information (Street, 2003). Hence, the present findings support existing reports regarding the importance of narrative skills during communication in the health care setting.

**Health Care Communication Skills as Related to Age and Health Status**

Health status emerged as a significant predictor of health care communication skills, although findings indicate both positive and negative relationships. These conflicting findings were not anticipated, but they are both consistent and inconsistent with previous studies (Beers et al., 2003; Cooper & Roter, 2003; Dearborn et al., 2006; Kreps, 2006; Tran et al., 2004). Several reports have suggested that patients with good health status tend to have higher health literacy levels, are more participatory in health care visits, and are more satisfied with their health care (Cooper & Roter, 2003; Rudd, Kirsch, & Yamamoto, 2004; Wolf, Gazmararian & Baker, 2005). Contrary to these findings, the present results found health care communication ratings to increase with an increase in reported health conditions. These results are consistent with a study by Cooper and Roter (2003) that found that patients with health conditions or sicker patients tended to provide more biographical information during physician–patient interactions but were less engaged in social conversation than patients with good health status. Sicker patients also reported less satisfaction with their health care (Cooper & Roter, 2003; Thompson et al., 2004). Similarly, in the present study, increased health conditions were related to higher overall health care communication ratings. Recall that 79% of the participants reported having no significant health condition, and 20% reported having a history of one or more of the following health conditions: heart attack, congestive heart failure, stroke, neurological disease, depression, diabetes, and high blood pressure. This percentage of participants reporting health conditions is similar to a study by Rudd et al. (2004), in which 77% of participants reported no health conditions. However, in this health literacy study, participants without significant health conditions achieved higher health literacy test scores than those with health conditions. The difference in these findings could be related to the different methods used in the investigations (i.e., ethnographic vs. experimental study).

In contrast to the positive relationship found between health conditions and health care communication, a negative relationship was found between specific items on the HCCP and health status, suggesting that as health conditions increase, self-ratings for questioning during health
care interactions decrease. The quality of health care satisfaction a patient has is dependent on adequate communication skills, and questioning is considered the strongest predictor of positive health outcomes (Cooper & Roter, 2003; Hoffman et al., 2005). By asking questions, patients compel health care providers to discuss health matters that otherwise would not be addressed during the communication interaction (Street, 2003). By seeking information from the provider, patients not only gain information but may also affect the direction of the interaction (Street, 2003).

The ability to be an active member during health care visits by asking questions is important for older adults because they are often faced with multiple and complex health problems (Cooper & Roter, 2003; Wolf et al., 2005). Moreover, reports have indicated that asking questions during provider–patient interactions is one of the most direct ways of remaining active in one’s health care management (i.e., gathering information and gaining clarification; Street, 2003). Taken together, the present findings on health status suggest that although patients with poor health status may provide information regarding their medical conditions during health care encounters, they experience a circular problem with health care in which they ask fewer questions, resulting in less health care information given and decreased understanding of health conditions. Decreased understanding of health conditions results in lower health literacy to adequately manage health problems, thereby resulting in decreased health care satisfaction and possibly poorer health outcomes.

Finally, a positive relationship was found between age and understanding health information on the HCCP. This item involved the participant’s reported frequency of understanding the provider’s explanation concerning his or her health condition. Reports indicate that the presentation of complex materials during health care visits with older adults may decrease the patient’s ability to understand, and inform during health care visits. These deficits may be characterized by decreased ability to sequence events to produce a cohesive narrative, memory deficits, and word retrieval deficits (Coelho, 2002; Hays, Niven, Godfrey, & Linscott, 2004). Such deficits can impact the patient’s ability to accurately question, explain, clarify, understand, and inform during health care visits. These preliminary findings suggest a need for exploring the use of pragmatic-based therapy activities that may empower older individuals with communication disorders during health care visits.

### Limitations of Study and Directions for Future Research

The present study provides new information regarding social communication and health care communication skills. However, it is a preliminary investigation with limitations. A major shortcoming is that the sample of participants had limited diversity. African Americans represented only 18% of the participants, and only 23% were males. These low percentages limited the analysis in terms of ethnicity and gender. The education levels of the sample also may limit generalization of the findings. Although participants’ education ranged from 6 to 20 years, with a mean of 14 years for each age group, 50% of the participants had college degrees. This high percentage of college graduates may not be representative of older adults in the general population. Future studies with a more diverse sample may find other predictors and relationships between pragmatics and health care communication skills.

There were also limitations regarding the assessments used in the study. Research should aim to further validate the HCCP using larger and more diverse samples of individuals with and without communication disorders. Additionally, the low but significant correlations of some variables need further examination. One possible contributor to the low correlations could relate to the types of
instruments used in the present study. The FACS–SC, for example, is an assessment tool requiring observation of communication skills, whereas the HCCP is a self-report assessment tool. Future studies using two self-report tools may yield higher correlations between perceived pragmatic skills used in social and health care contexts. In contrast, pragmatic analysis of audio- or video-taped provider–patient interactions may provide additional information on patients’ communication behavior. Existing audio-taped provider–patient interaction studies did not employ a pragmatic analysis of these communicative behaviors as used in communication sciences and disorders. In addition to suggestions for assessing health care communication in future studies, narrative assessments should be expanded as well. Although narratives were found to be a predictor of health care communication skills, only one narrative was elicited in the present study. Further investigation of this relationship is needed using more than one narrative task to obtain a more extensive narrative assessment that is not limited to one topic, as in the present study.

Future studies should include stringent classifications of health status that could be subjected to a reliable analysis. In the present study, no rating or ranking was used to differentiate the severity of health conditions, resulting in only speculations regarding health status and health care communication skills.

Overall, additional studies are necessary to investigate whether the findings from the current study regarding relationships between social communication skills and pragmatic skills in the health care setting generalize to older and younger adult clients with mild communication disorders. The results of the present study provide important information by suggesting that the FACS–SC has value in identifying social communication skills that may be potentially related to pragmatic skills needed in the health care setting.

**REFERENCES**


Contact author: Eva Jackson Hester, Department of Audiology, Speech-Language Pathology & Deaf Studies, Towson University, Towson, MD 21252. E-mail: echester@towson.edu.
### APPENDIX. NARRATIVE MATURITY RATING USING STORY GRAMMAR LEVELS

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Isolated Description:</td>
<td>Story limited to isolated description of people, places and events. No sequence of events.</td>
</tr>
<tr>
<td>2. Temporal Sequence:</td>
<td>Story limited to a temporally related sequence of events or actions. Ideas often linked by <em>and, so, and then.</em></td>
</tr>
<tr>
<td>3. Causal Sequence:</td>
<td>Story is limited to a causally related sequence of events. Series of actions that are causally linked but without planning. Causal relationships can be implied, but must characterize most of the story.</td>
</tr>
<tr>
<td>4. Abbreviated Episode:</td>
<td>Story is goal directed with stated problem. Characters’ aim or intentions are implied or stated.</td>
</tr>
<tr>
<td>6. Complex/Multiple Episodes:</td>
<td>At least one complete episode with goals stated, accompanied by additional abbreviated or other complete episodes.</td>
</tr>
<tr>
<td>7. Interactive Episodes:</td>
<td>Two major characters with separate goals whose actions influence each other. Complete episodes with clear planning indicated for characters.</td>
</tr>
</tbody>
</table>