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AGE-ADAPTED SPEECH IN AN ASSISTED LIVING FACILITY

A Thesis in
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by
Danielle Catona

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The thesis of Danielle Catona was reviewed and approved* by the following:

Rachel A. Smith
Assistant Professor, Department of Communication Arts & Sciences
Thesis Adviser

Jon F. Nussbaum
Professor, Department of Communication Arts & Sciences

Roxanne L. Parrott
Distinguished Professor, Department of Communication Arts & Sciences, Department of Health
Policy & Administration

Thomas W. Benson
Head, Department of Communication Arts & Sciences, Edwin Erle Sparks Professor of Rhetoric

*Signatures are on file in the Graduate School.

Abstract

Guided by the stereotype activation model of communication in older adulthood (ASI, Hummert, 1994b), the communication predicament model of aging (CPM, Ryan, Giles, Bartolucci, & Henwood, 1986), and communication accommodation theory (CAT, Giles, Mulac, Bradac, & Johnson, 1987), this thesis examined what predicts formal caregiver's use of normal adult or age-adapted speech with residents in an assisted living facility (ALF). Using a half-block design (Kenny, Kashy, & Cook, 2006), this study recorded and evaluated 120 caregiver-resident interactions, cues coders observed from residents, and how caregivers ($N = 20$) associated those residents ($N = 6$) with age-related stereotypes. Linear mixed effects modeling analyses indicated residents with more aged physiognomic cues were associated with weaker ratings of independence and hearing proficiency, and to stronger ratings of wisdom. Residents with more infirm physique characteristics were related to weaker ratings of independence, wisdom, healthiness, and hearing proficiency. A poorly groomed, unkempt, unfashionable appearance was related to weaker ratings of healthiness. Younger caregivers associated residents more strongly with the positive dimension of the wisdom stereotype. ALF beliefs were unrelated to activation of age-related stereotypes. Caregivers used fewer features of normal speech with residents who were associated less strongly with the positive dimension of the hearing proficiency stereotype. Workload burden and relationship history were unrelated to language production. BLOCKO analyses revealed partner effect explained the most variance in caregiver-resident interactions. Implications of these findings for ALFS are discussed. Age-adapted speech is considered a key challenge to assisted living facilities' philosophy of maintaining their residents' sense of autonomy, dignity, and personal choice.

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The future belongs to those who believe in the beauty of their dreams.

Eleanor Roosevelt

CHAPTER ONE

FORMAL CARE FOR AGING ADULTS

The United States is an aging society. Older adults are living longer. Life expectancy in the U.S. has increased from 47 years for Americans born in 1900 to 78 years for those born in 2006 (Older Americans, 2008). By 2030, the number of Americans 65 and older is expected to reach 71 million, or roughly 20% of the U.S. population (Health, United States, 2007; Older Americans, 2008).

As adults age, they often require assistance with activities of daily living (ADLs) such as bathing, dressing, eating, moving from one place to another, and using the toilet (Manton & Stallard, 1991). The projected increase in the number of older adults coincides with a decrease in the number of available family caregivers (United States Bureau of the Census, 1992; United States Bureau of the Census, 1993). With older adults outpacing available caregivers, estimates are that by 2030, 2 million older adults will require formal care instead of informal, family care (Decker, Dollard, & Kraditor, 2001). Formal care options include nursing homes (NHs) and assisted living facilities (ALFs).

This study examines the communication encounters among formal caregivers and residents in an ALF, which have received little attention in previous research. NH encounters between formal NH caregivers and NH residents have been studied, and have been characterized as limited, controlling (Lanceley, 1985), task-oriented (Grainger, 1995; Lubinski, 1995; Williams, Ilten, & Bower, 2005), and patronizing (Ashburn & Gordon, 1981; Carporael, 1981; Ryan, Hummert, & Boich, 1995). These communication features negatively affect NH residents' wellbeing (e.g., Aud & Rantz, 2005; Rodin & Langer, 1980). Moreover, if NH communication features also are characteristic of ALF caregiver-resident encounters, then that would interfere

with the ALF's stated goal of maintaining residents' sense of autonomy, dignity, and personal choice.

To understand ALF caregiver-resident encounters, this study utilizes the stereotype activation model of communication in older adulthood (ASI, Hummert, 1994b), the communication predicament model of aging (CPM, Ryan, Giles, Bartolucci, & Henwood, 1986), and communication accommodation theory (CAT, Giles, Mulac, Bradac, & Johnson, 1987). The next section describes interactions in formal care facilities for aging adults.

Formal Care Facilities

NHs are defined as facilities that have three or more beds and routinely provide nursing care services (Gabrel, 2000). The 1997 National Nursing Home Survey found that most NH residents needed assistance with ADLs. For example, over 96% needed assistance with bathing and showering, and 87% needed assistance in dressing. Often residents need help with multiple activities: over 75% needing assistance with three or more such as bathing, dressing, and eating. As a result, NH residents may relinquish many decisions about when and how these activities occur, such as when to eat, bathe, and sleep (Abrams & Beers, 1995). There is an imbalance of power in the resident-caregiver relationship in favor of formal caregivers (Hummert & Ryan, 1996). Relinquishing such decisions is thought to impact residents' well-being, including isolation, depression, cognitive and physical decline (Aud & Rantz, 2005), and learned helplessness (Rodin & Langer, 1980).

Nursing Home Resident-Caregiver Communication

The power-dynamic between caregivers and residents also appears in their conversations. Formal caregiver interaction with residents has been described as limited, controlling (Lanceley, 1985), task-oriented (Grainger, 1995; Lubinski, 1995; Williams et al., 2005), and patronizing

(Ashburn & Gordon, 1981; Carporael, 1981; Ryan et al., 1995). Formal caregivers control conversations with residents by talking exclusively about residents and their care, and by avoiding personal self-disclosure and other non-care related topics (Nussbaum, 1990). Such interactions restrict residents' involvement in decision making, challenge their competence, reinforce their dependency on caregivers (Baltes & Wahl, 1996; Williams, Kemper, & Hummert, 2003), contribute to the infantilization of older adults (Whitbourne & Wills, 1993), diminish their self-concepts, and inhibit future interpersonal interactions (Ryan et al., 1986).

These communication-related outcomes may explain why 30% of older adults would prefer death to permanent placement in an NH (Matimore, Wenger, Cesbiens, Teno, Hamel, & Liu, 1997). Residents' fear and dislike of NHs has led to a search for alternatives, such as ALFs.

Assisted Living Facilities

ALFs are referred to as an emotionally acceptable alternative to NHs (Zimmerman, 2000). ALFs currently serve one million older adults and are the most rapidly growing segment of facilities caring for older adults (Aud & Rantz, 2005; Mollica & Johnson-Lemarche, 2005). Although there is variation between facilities, in general, ALFs provide a level of privacy and care somewhere between that experienced at home versus NHs (Manton & Gu, 2001; Mitchell & Kemp, 2000). The goal of ALFs is to enable residents to maintain independence by promoting their autonomy, dignity, and personal choice (National Center for Assisted Living [NCAL], 2001). The success of ALFs in achieving these goals and overcoming the problems encountered in traditional nursing homes remains to be seen. Little research has examined why approximately 24% of ALF residents leave due to dissatisfaction (Phillips, Hawes, Spry, & Rose, 2000), in contrast to the 20% and 43% of ALF residents who leave the facility because they need the level of care provided in a NH (Gulyas, 1997; Hodlewsky, 1998).

The little research that exists provides a few reasons for why ALFs may not succeed. Concerns have been expressed about ALFs turning into “mirror images of nursing homes” (Steinhauer, 2001, p. 1A) or “becoming mini-nursing homes” (Zahn, 2001, p. 1A). Facility and/or state rules and regulations may restrict residents’ daily pleasures, independence, and quality of life (Dobbs et al., 2008). Option in activity programming may be based on stereotypes of generational preferences rather than individual preferences (Dobbs et al., 2008). Even more dramatically, ALFs have been described as an oppressive environment where caregivers dehumanize residents based on ethnographic research and resident interviews (Dobbs et al., 2008, Williams, 2009). It is this last description – dehumanization – that may reflect caregivers’ communication practices with ALF residents, such as if ALF caregivers use the age-adapted speech noted among NH caregivers. This study focuses on this possibility, by observing the presence or absence of ALF caregivers’ use of age-adapted speech. Understanding the existence and predictors of age-adapted speech has implications for effective caregiver-resident communication in general and successful ALFs specifically.

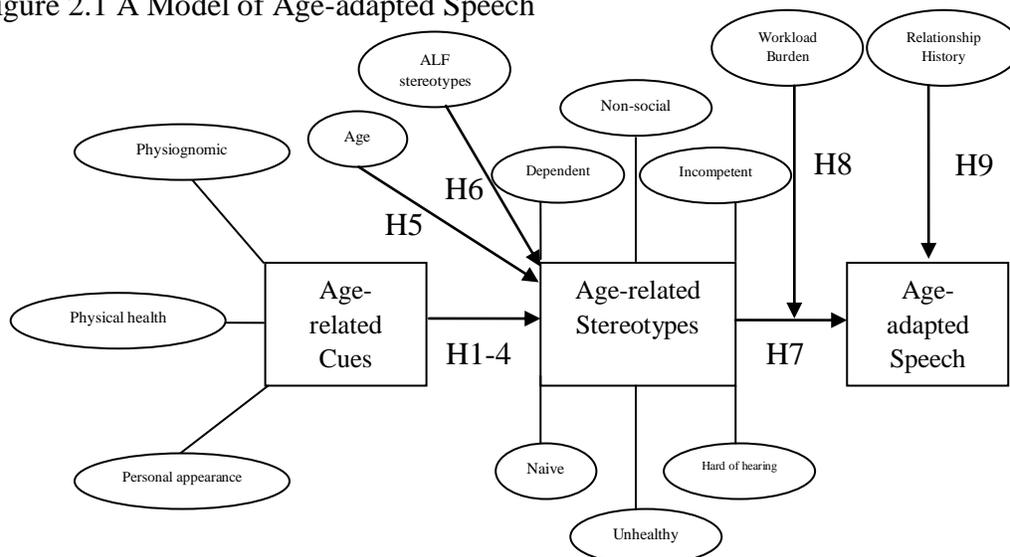
Three theories frame this research into age-adapted speech: ASI (Hummert, 1994b), CPM (Ryan et al., 1986), and CAT (Giles et al., 1987). The next chapters outline these theories and specific hypotheses tested in this study, starting with stereotype activation in Chapter two.

CHAPTER TWO

THEORETICAL FRAME

The main argument of this study is that residents' cues, caregiver biases, and contextual features predispose caregivers to activate age-related stereotypes, and these activated stereotypes shape how caregivers initiate conversations with residents by using normal or age-adapted speech (Hummert, 1994b). There are two reasons why activated stereotypes may lead to the use of normal or age-adapted speech: to meet the resident's needs (Coupland, Coupland, Giles, & Henwood, 1988) and to accentuate caregiver-resident differences (Coupland et al., 1988). Two other reasons for speech choices include individual differences (e.g., age, ALF beliefs, and poor monitoring) and relationship history (Burgoon, Stern, & Dillman, 1995). These explanations differ in their predictions as to whether a given caregiver may use age-adapted speech with all residents (e.g., poor monitoring), only residents with age-related cues (e.g., reactions to cue-activated stereotypes), or with only particular residents with age-related cues (relationship history). The entire model can be seen in Figure 2.1. The next sections cover these explanations in more detail.

Figure 2.1 A Model of Age-adapted Speech



Social Information Processing and Stereotype Activation

Stereotyping is a common part of interpersonal communication. When strangers interact they may have very little knowledge about each other and, consequently, their uncertainty may be high (Berger & Bradac, 1982). Individuals automatically try to reduce some of this uncertainty. One strategy is to use available cues to categorize the interaction partner into a social group, and use group-related stereotypes to guide the interaction, because it increases predictability and comfort (Crocker, Major, & Steele, 1998). Stereotypes are defined as a set of beliefs about the characteristics or attributes of a group and its members (Allport, 1954; Bargh, Chen, & Burrows, 1996; Tajfel, 1969). Cues enable people to access stereotypes from their memory (Crocker, Major, & Steele, 1998). This process is not limited to initial interactions with strangers. In most interpersonal encounters, people often lack the time or the cognitive resources to process all the information available to them about their conversational partners.

Consequently, actors use available cues to categorize their partners into social categories based on limited amounts of information (Fiske & Taylor, 1991), then access category-related stereotypes, and finally use them to guide their interaction (Giles & Noels, 1997). Cue-driven activation of stereotypes is a cognitively efficient method for initializing interpersonal interactions (Fiske & Taylor, 1991). Theoretically, anyone initiating conversations— residents or caregivers – may be categorizing his/her interaction partner, and using stereotypes to guide the conversation.

Six stereotypes emerge from the existing literature on age-related encounters. These include (a) independence (Hummert, 1990, 1994a; Hummert, Garska, Shaner, & Strahm, 1994; Palmore, 1990), (b) sociability (Braithwaite, Lynd-Stevenson, & Pigram, 1993; Coupland, Coupland, & Giles, 1991; Gold, Arbuckle, & Andres, 1994; Hummert, 1990, 1994a; Hummert,

et al., 1994), (c) competence (Coupland, et al., 1991; Emry, 1986; Estes & Binnery, 1979; Gold, et al., 1994; Kemper, Kynette, & Norman, 1992; Palmore, 1988; Stewart & Ryan, 1982), (d) wisdom (Berry & McArthur, 1985; Braithwaite, et al., 1993; Hummert, 1990, 1994a; Hummert, et al., 1994; McArthur & Apatow, 1983), (e) healthiness (Harris, 1981; Hummert, 1990, 1994a; Hummert, et al., 1994; Palmore, 1990), and (f) hearing proficiency (Hummert, 1990, 1994a; Hummert, et al., 1994, Ryan, et al., 1986; Ryan et al., 1995). A more comprehensive definition and illustration of each stereotype dimension appears in Table 2.1.

Table 2.1 *Stereotype Definitions and Illustrations*

Stereotype	Definition	Positive Illustration	Negative Illustration
Independence	Ability to perform activities of daily living (ADLs) with varying amounts of assistance	Independent: An individual that requires little to no assistance with ADLs	Dependent: An institutionalized individual that requires assistance with ADLs
Sociability	Ability to engage in social interactions, having conversational competence	Social: A friendly, sociable individual that engages in appropriate conversations	Antisocial: An isolated, lonely individual that engages in inappropriate conversations including painful self-disclosure and off topic verbosity
Competence	Ability to learn and integrate new information including linguistic abilities and working memory	Competent: An individual that is able to process complex linguistic structures, speaks using a normal adult rate, and has a good working memory	Incompetent: A severely impaired individual that is unable to process complex linguistic structures, speaks slower, and has a poor working memory
Wisdom	Possessing practical knowledge and life experiences	Wise: An individual that possesses practice knowledge and life experiences, described as sage, expert, advice giver, and storyteller	Naïve: An individual that lacks practical knowledge and life experiences, is unable to provide advice and tell a compelling story
Healthiness	Possessing traits such as being health conscious, active, and alert	Healthy: An active, agile, and alert individual	Unhealthy: A feeble, slow moving, sedentary individual
Hearing proficiency	Ability to hear speech without use of a hearing aid, repetition of speech, or increased volume	Hearing proficient: An individual that can hear without use of a hearing aid, repetition of speech, or increased volume	Hard of hearing: An individual that uses a hearing aid, turns/ leans in toward the speaker, or requests the speaker to repeat or speak louder

As with other group-related stereotypes, age-related stereotypes are activated based on available cues. These cues may be observed in the resident, the environment or may result from caregiver biases.

Partner cues. Three partner cues (i.e., observable physical characteristics) are particularly relevant for age-related stereotypes: physiognomic, physical health, and personal appearance. Each cue is described in more detail in the following paragraphs.

Physiognomic cues to age appear in the face, including size and placement of eyes, nose, and mouth, the size of the chin, cheeks, and forehead in relation to size of the skull, the wrinkled condition of the skin, and the presence and color of hair (Berry & McArthur, 1986).

Physiognomic cues are automatically processed (Gilbert & Hixon, 1991; Greenwald & Banaji, 1995), influence social perceptions (Berry & McArthur, 1985, 1988; Hummert, 1994a), and may be enough to activate age-related stereotypes (Ryan, et al., 1986; Hummert, 1990; 1993). For example, Hummert (1994a) presented college students with photographs of older men and women whose facial features suggested three age ranges: young-old (55-64 years), middle-old (65- 74 years), and old-old (75 years and over). The physiognomic cues to age that distinguished the photographs representing the three age groups included degree of wrinkled skin, grey hair, and eye droop. As predicted, the photographs evoked age-related stereotypes. In addition, photographs of the young-old individuals almost exclusively paired with positive dimensions of age-related stereotypes, whereas photographs of the old-old individuals were paired primarily with negative ones. In a different example, Berry and McArthur (1985) investigated the social consequences of having a baby face for college-age males. A baby faced appearance included large, round eyes, a short, narrow nose, a large forehead, and a small chin. As predicted, young men with more baby-face features were judged as warmer, kinder, more honest, and as more

naïve than were those with more mature facial features. Based on this research, the following hypotheses are proposed:

Hypothesis 1: Caregivers associate residents who have more physiognomic cues (more wrinkled skin, grey hair, and eye droop) indicating old-old age more strongly with the negative dimensions of age-related stereotypes: a) dependent, b) antisocial, c) incompetent, d) naïve, e) unhealthy, and f) hard of hearing.

Hypothesis 2: Caregivers associate residents who have more physiognomic cues (large, round eyes; short, narrow nose, large forehead, and small chin) indicating young-young age more strongly with the negative dimensions of age-related stereotypes: a) dependent, b) incompetent, and c) naive.

In addition to physiognomic cues, *physical health cues* are associated with the positive dimensions of age-related stereotypes. Cues of physical health include sexual and health-conscious, active, alert, upright posture, and good muscle tone (Hummert, 1994b). Infirmity cues, or the counter to physical health, include feebleness, moving slowly, sedentary, poor posture, and the use of a mobility device (cane, walker, or wheelchair) (Hummert, 1990; Hummert et al., 1995; Schmidt & Boland, 1986). The following hypothesis is proposed:

Hypothesis 3: Caregivers associate residents who have more infirm physique characteristics (poor posture and use of a mobility device) and fewer healthy physique characteristics (upright posture and confident gait) more strongly with the negative dimensions of age-related stereotypes: a) dependent, b) antisocial, c) incompetent, d) naïve, e) unhealthy, and f) hard of hearing.

Third, *personal appearance* can activate stereotypes. Looking distinguished has been associated with the positive dimensions of age-related stereotypes, whereas looking dirty and

unattractive has been associated with the negative ones (Hummert, 1990; Schmidt & Boland, 1986). The stereotype research suggests that well-groomed, fashionable, older resident should activate the positive dimension of age-related stereotypes whereas a poorly groomed, unfashionable one should lead to the negative dimension of age-related stereotypes (Hummert, 1994b). Cues for a well-groomed, fashionable appearance include brushed hair, brushed teeth, clean shaven, clean face, clean hands, and matching outfits (Hummert, 1994b). Poorly-groomed, unfashionable cues include unbrushed hair, unbrushed teeth, unshaven, dirty face, dirty hands, and mixed match outfits (Hummert, 1994b). The following hypothesis is proposed:

Hypothesis 4: Caregivers associate residents who have more poorly groomed, unkempt, unfashionable appearance (unbrushed hair, unbrushed teeth, unshaven, dirty face, dirty hands, and mixed match outfits) and fewer well groomed, fashionable appearance (brushed hair, brushed teeth, clean shaven, clean face, clean hands, and matching outfits) more strongly with the negative dimensions of age-related stereotypes: a) dependent, b) antisocial, c) incompetent, d) naïve, e) unhealthy, and f) hard of hearing.

Table 2.2 *Cues Activating Positive Stereotypes*

Cues	Independent	Social	Competent	Healthy	Hearing proficient	Wise
Smooth skin	X	X	X	X	X	
Colored hair	X	X	X	X	X	
Eye firm	X	X	X	X	X	
Small, slit eyes	X	X	X	X	X	
Long, wide nose	X	X	X	X	X	
Small forehead	X	X	X	X	X	
Large chin	X	X	X	X	X	
Upright posture	X	X	X	X	X	X
Good muscle tone	X	X	X	X	X	X
Lack of mobility device	X	X	X	X	X	X
Lack of hearing aid	X	X	X	X	X	X
Matching outfit	X	X	X	X	X	X
Outfit changes	X	X	X	X	X	X
Brushed hair	X	X	X	X	X	X
Brushed teeth	X	X	X	X	X	X
Clean shaven	X	X	X	X	X	X
Clean face	X	X	X	X	X	X
Clean hands	X	X	X	X	X	X

Table 2.3 *Cues Activating Negative Stereotypes*

Cues	Dependent	Antisocial	Incompetent	Unhealthy	Hard of hearing	Naïve
Wrinkling skin	X	X	X	X	X	
Grey hair	X	X	X	X	X	
Eye droop	X	X	X	X	X	
Large, round eyes	X		X			X
Short, narrow nose	X		X			X
Large forehead	X		X			X
Small chin	X		X			X
Poor posture	X	X	X	X	X	
Use of a mobility device	X	X	X	X	X	
Use of hearing aid	X	X	X	X	X	
Mixed-match outfit	X	X	X	X	X	
Lack of outfit change	X	X	X	X	X	
Unbrushed hair	X	X	X	X	X	
Unbrushed teeth	X	X	X	X	X	
Unshaved	X	X	X	X	X	
Dirty face	X	X	X	X	X	
Dirty hands	X	X	X	X	X	

Age as a cognitive bias. Characteristics of speakers can bias their attention and activation of age-related stereotypes. This study focuses on speakers' (i.e., caregivers') age. Middle-aged and elderly speakers have richer, more complex aging schemas than do young adults (Brewer &

Lui, 1984; Heckhausen, Dixon, & Baltes, 1989; Hummert, Garstka, Shaner, & Strahm, 1995), because elderly adults, in comparison to young adults, have more complex representations of their age group (Brewer & Lui, 1984). One possible explanation for these differences is that older adults' integrate their observations and own life experiences of aging into their schemas about aging (Baltes, 1987; Whitbourne, 1985). In addition to schemas, middle-aged and elderly adults, in comparison to young adults, are more likely to associate positive dimension of age-related stereotypes with older adults (Hummert, 1990, 1993). The following hypothesis is proposed:

Hypothesis 5: There is a negative relationship between caregivers' chronological age and caregivers' associations of residents with the negative dimensions of the six stereotypes: a) dependent, b) antisocial, c) incompetent, d) naïve, e) unhealthy, and f) hard of hearing.

Age salience as a context cue. Cues in the environment where interactions occur may influence stereotype activation. This study focuses on age salience. Age salience is the degree to which the interaction setting emphasizes a characteristic related to the partner's membership in a particular age group (Hummert, 1994b). Settings with greater age-salience activate more age-related stereotypes, which are then associated with the conversational partner (Giles, Mulac, Bradac, & Johnson, 1987; McGuire, McGuire, Child, & Fujioka, 1978; Tajfel & Turner, 1979).

Conversations with older adults typically occur in one of three settings: the person's home, a NH, or an ALF. These three settings vary in their characteristics and descriptions. Imamoglu (2007) argued that homes were positively characterized as warm, cozy, comfortable, familiar, personalized, safe, private, stimulating, and social. Based on these descriptions, conversing with people in their homes may evoke positive stereotypes including independence,

sociality, competence, healthiness, and hearing proficiency (Hummert, 1994a). In contrast, the NHs were negatively characterized as a place where people with numerous health care requirements went because they were unable to care for themselves (Imamoglu, 2007). NHs were viewed as opposite of homes, and associated with a lack of control, lack of flexibility, loss of privacy, and lack of sociality. Thus, conversations occurring in NHs may evoke negative stereotypes including dependence, lack of sociality, incompetence, unhealthiness, and lack of hearing proficiency (Hummert, 1994a).

ALFs were characterized as an intermediate setting that bridged the gap between independent living and NHs; it was associated with some independence and opportunity for socialization (Imamoglu, 2007). It is these two characteristics then – independence and socialization – that may bias stereotype activation. If caregivers perceive the context as more a place that fosters independence and socialization, then they are likely to perceive the residents in this wing as more independent and social. The following hypotheses are proposed:

Hypothesis 6: Caregivers who hold more negative stereotypes about ALFs' ability to promote autonomy and sociability associate residents with more negative dimensions of age-related stereotypes: a) dependent and b) antisocial.

Stereotypes and Speech Production

In most interpersonal encounters, such as starting a conversation, adults use normal adult speech when talking with other adults (Kemper, 1994). Normal adult speech is characterized by complex vocabulary and grammar (e.g., multisyllabic words or complete sentences), appropriate forms of address (e.g., Mr., Ms., or Mrs.), and varied conversation topics (e.g. day to day experiences and personal disclosures) (Kemper, 1994). Nonverbal features include varied intonation, volume, and rate, direct eye contact, normal personal space (e.g., standing two to four

feet apart), animated facial expression, various gestures, and social-polite touch (Burgoon & Hale, 1988).

If triggers are present, such as cue-activated, category-related stereotypes (Giles & Noels, 1997), then adults may modify their speech with other adults (Kemper, 1994), such as using age-adapted speech (Hummert, 1994b, Ryan et al., 1986). Age-adapted speech (see Table 2.4 and 2.5) is characterized by simplified speech (e.g., basic grammar and vocabulary), overuse of the word “we,” overuse of terms of endearment (e.g., “dearie” or “honey”), limited conversation topic selection (e.g., talking exclusively about resident and care matters), and exaggerated praise for minor accomplishments (Ryan et al., 1995).

Table 2.4 *Verbal Features of Age-adapted Speech*

Feature	Example
Vocabulary	Simple, few multisyllabic words, childish terms, minimizing words, pronoun modifications
Grammar	Simple clauses and sentences, repetitions, tag questions, imperatives, fillers, and fragments
Forms of address	First names and nicknames, terms of endearment, childlike terms, and third person references
Topic management	Limited topic selection and topic reinforcement, interruptions, dismissive of other-generated topics, and exaggerated praise for minor accomplishments

Modifications to vocalics include speaking loudly, slowly, and in a high pitched, exaggerated tone. Nonverbal modifications include limited eye contact, standing too close and/or over a person who is seated or in bed, disapproving head shaking, hands on hips, crossed arms, exaggerated smiles, and excessive patting (Armstrong & McKechnie, 2003).

Table 2.5 *Nonverbal Features of Age-adapted Speech*

Feature	Example
Voice	High pitch, exaggerated intonation, loud, slow, and exaggerated pronunciation
Gaze	Low eye contact, staring, roll eyes, and wink
Proxemics	Stand too close, stand over a person seated or in bed, and stand too far off
Facial expression	Frown, exaggerated smile, and raised eyebrows
Gestures	Shake head, shrug shoulders, hand on hips, cross arms, and abrupt movements
Touch	Pat on head and pat on hand, arm, shoulder

Age-adapted speech viewed as unwanted or unwarranted from the partner's perspective is perceived as patronizing (Ytsma & Giles, 1997). This study focuses on the type and number of age-adapted speech features, not individuals' perceptions of age-adapted speech. Therefore, the term age-adapted speech, not patronizing speech, is used throughout the study.

Stereotype-driven Speech Production

As stated earlier, I predict that residents' cues, caregiver biases, and contextual features predispose caregivers to activate age-related stereotypes, and these activated stereotypes shape how caregivers initiate conversations with residents by using normal or age-adapted speech (Hummert, 1994b). Activated stereotypes may lead to the use of normal or age-adapted speech as a means (a) to meet the resident's needs (Coupland et al., 1988) and (b) to accentuate caregiver-resident differences (Coupland et al., 1988). Individual differences and relationship history (Burgoon, Stern, & Dillman, 1995) may also shape speech choices. Further, it is possible that a given caregiver may use age-adapted speech with all residents, only residents with age-related cues, or with only particular residents with age-related cues.

Meeting residents' communication needs. Cues that trigger age-related stereotypes may lead caregivers to use normal or age-adapted speech (Hummert, 1994b, Ryan et al., 1986) with residents. Age-related stereotypes often include beliefs about the communication needs and capabilities of people categorized into different age groups. The positive dimensions of the six age-related stereotypes in this study are independence, sociality, competence, wisdom, healthiness, and hearing proficiency (Hummert, 1994b). These positive dimensions suggest that partners are fully functioning adults. Thus, such residents should be addressed with normal adult speech (Hummert, 1994b). In contrast, the negative dimensions of the six age-related stereotypes in this study are dependence, lack of sociality, incompetence, naïveté, unhealthiness, and lack of

hearing proficiency (Hummert, 1994b). These negative dimensions suggest that partners are limited functioning adults, and need to be addressed with age-adapted speech (Caporael et al., 1983; Coupland, et al., 1988; Hummert, 1994b; Ryan et al., 1986).

Social identity protection. Actors may use age-adapted speech with conversational partners who they associate with negative stereotypes in an effort to accentuate group differences between themselves and their conversational partners (Coupland et al., 1988; Giles et al., 1987). Actors desire their identity to be positively, distinct compared to out-group members (Tajfel & Turner, 1979). Age-adapted speech or divergent communication achieves this psychological goal by signaling out-group membership and socially distancing actors from partners (Giles et al., 1987). In contrast, activation of the positive dimension of age-related stereotypes may lead actors to use normal adult speech in an effort to signal in-group solidarity or similarity between one's own group and that of their interaction partner (Giles et al., 1987).

Thus, both needs-driven and identity-protection explanations suggest that positive activated stereotypes should lead caregivers to use normal adult speech when starting conversations with residents. In contrast, negative ones – through meeting perceived needs or social distancing – should trigger caregivers to use age-adapted speech with residents. The following hypothesis is proposed.

Hypothesis 7: Caregivers who associate residents more with the negative dimensions of age-related stereotypes use more features of age-adapted speech when they initiate conversations with residents.

Poor monitoring. The first two explanations presume that people modify their speech based on how they categorize their partners into age-related categories. It is also possible that some features of the actor or his/her environment lead them to use particular speech patterns.

Interaction adaptation theory (IAT, Burgoon, Stern, & Dillman, 1995) provides possible explanations for an actor's speech consistency across multiple partners including poor self-monitoring (Snyder, 1974) and inability to adjust speech.

In the case of ALF caregivers, the amount and difficulty of work (Purk & Lindsay, 2006) may prevent them from monitoring their language and adjusting their speech to particular residents. The amount of work or quantitative workload burden is defined as the number of projects people and projects an employee is responsible for over a given period of time (Beehr & Newman, 1978; Cooper & Marshall, 1976). For example, a caregiver might feel overloaded because of the number of residents and tasks she is responsible for in a given day. The pressure to do more in less time is particularly prevalent in organizations that are understaffed (Miller, Griffin, & Hart, 1999). ALFs are characterized by high staff turnover rates (American Association of Homes and Services for the Aging, 2002; NCAL, 2001). As staff leave, the remaining caregivers are assigned additional duties, which increases their quantitative workload (Banaszak-Holl & Hines, 1996; Cohen-Mansfield, 1997).

The difficulty of work due to lack of experience or skills is referred to as qualitative workload burden (Beehr & Newman, 1978; Cooper & Marshall, 1976). For example, a caregiver might feel overwhelmed by the complexity of providing personal care while promoting resident independence because she hasn't received training about respecting resident's rights. *A National Study of Assisted Living for the Frail Elderly* reported relatively little training was required for ALF employees (Hawes, Phillips, & Rose, 2000). For those who were required to take training, the most common amount of required training was between one and 16 hours of training. Further, only 11% of the staff who took required training completed it prior to the start of work. Instead, they received on-the-job training or a combination of pre-service and on-the-job

training. In regards to formal education, eighty-five percent of the respondents had completed high school and just over one-third (35%) had at least some college.

As a result of being overextended and under-trained, these caregivers may not have the time or cognitive resources available to regulate their speech behaviors to different residents. As a means to gain control over their environment, caregivers may use age-adapted speech more frequently, because it provides them more control over the conversation. Based on these findings the following hypothesis is proposed:

Hypothesis 8: As caregivers report higher workloads, they use more age-adapted speech with their residents.

Relationship history. Actors may maintain particular speech patterns with partners based on their relational history. As individuals spend increased amounts of time with each other, their communication patterns become more idiosyncratic (Levinger & Snoek, 1972). The positive or negative evaluations of time spent together influences relational expectations, which encourages or discourages, respectively, future interaction (Andersen, 1992). For example, younger adults' quality of contact with the elderly has been found to be positively related to subjects' attitudes toward and perceptions of elderly individuals (Knox, Gekoski, & Johnson, 1986; Robb, 1979; Rose-Colley & Eddy, 1988; Fox & Giles, 1993).

In contrast to the earlier explanations, it is caregivers' particular history with specific residents, not category-related stereotypes, that shapes speech production. Said differently, regardless of how a caregiver may associate a resident with age-related stereotypes, the negative quality of their previous interactions may lead a caregiver to use more features of age-adapted speech with this negative resident. The following hypothesis is proposed:

Hypothesis 9: Caregivers with stronger, negative evaluations of their previous contact with a given resident use more features of age-adapted speech when they initiate conversations with this resident.

The Social Relations Model. Dyadic interactions by definition involve two individuals: the actor and his or her interaction partner. The Social Relations Model (SRM) (Kashy & Kenny, 2000; Kenny, 1994; Kenny & LaVoie, 1984; Kenny, Kashy, & Cook, 2006) is a model for dyadic data. There are three major types of effects in the SRM: actor, partner, and relationship effects. The SRM can address the question of how much of the total variance in dyadic interaction is due to individual-level effects (e.g., Caregiver Susan Black behaved the way she did when with Resident John Sampson because she always behaves the way, or Susan Black behaved the way she did when with John Sampson because everyone who is with John Sampson behaves this way), and how much of the variance is due to the specific relationship between the two individuals (e.g., Susan Black's behavior when with John Sampson is unique).

Previous applications of the SRM have been analyses of interpersonal perception (Kenny, 1994), self-disclosure (Miller & Kenny, 1986), memory (Bond, Dorsky, & Kenny, 1992), and aggression (Hubbard, Dodge, Cillessen, Coie, & Schwartz, 2001). There have also been studies of children (Ross & Lollis, 1989). To researcher's knowledge there have been no studies of older adults, age-related stereotypes, and age-adapted speech in the ALF context.

This study focuses on three forms of age-adapted speech: actors who chronically use it, partners who always evoke it, and actor-partner relationships that have adopted it. According to the SRM (Kenny, et al., 2006); these relationships are called actor, partner, and relationship effects. Actor effects refer to a person's average level of a given behavior in the presence of a variety of partners. For example, Susan Black's actor effect on the variable of age-adapted

speech measures the extent to which she initiates conversations with age-adapted speech no matter which residents is in the conversation. This effect meets the workload explanation for differences in speech production. Partner effects measure the extent to which caregivers tend to initiate conversations with particular residents using age-adapted speech. This explanation fits both the needs-adapted and identity-driven explanations for age-adapted speech. Last, relationship effects represent an actor's unique behavior with a particular partner. For example, Susan Black may only use age-adapted speech when she initiates conversations with John Sampson. This effect fits the relationship history explanation for age-adapted speech. The relationship effect is operationalized as the interaction variance after controlling for actors' and partners' effects across conversations. The following research question is proposed:

Research Question 1: Which effect—actor, partner, or relationship—explains the most variance in caregiver-resident interactions?

Summary

In this study, I argue that residents' cues activate age-related stereotypes, and these activated stereotypes influence how caregivers initiate conversations with residents by using normal or age-adapted speech. In an attempt to examine this phenomenon, this study observed the presence of normal or age-adapted speech in an ALF by evaluating caregivers' a) communication within encounters they initiate with residents in the facility, b) the cues coders observe from residents, and c) how caregivers associate those residents with age-related stereotypes. The goal of this project was to understand what predicts age-adapted speech. This phenomenon is considered a key challenge to ALFs' philosophy of maintaining their residents' sense of autonomy, dignity, and personal choice.

CHAPTER THREE

METHODS

Setting

The continuing care facility in which the study was conducted is licensed for 62 beds. Facility wings are separated by degree of residential needs; 32 beds are designated for residents requiring around-the-clock nursing and medical supervision (e.g., NH). The remaining 30 beds are designated for residents requiring moderate amount of assistance (e.g., ALF); this wing was the focus of this study.

The facility has three floors. The ground floor consists of the lobby, administrative offices, NH wing, the exercise room, and woodshop. The first floor houses the ALF wing, communal dining area, shops, and auditorium. The second floor includes the library, art gallery, and meeting room.

Observations occurred in the exercise room, ALF common area, and communal dining area between the hours of 9AM to 6PM. Therapy-related activities were observed in the exercise room. The ALF common area consisted of a TV, Wii, CD player, piano, a couch, recliner, and wooden tables. Happy hour, coffee klatch, card games, knitting, and Wii bowling took place in this space. Lunch and dinner were observed in the communal dining area.

The not-for-profit facility serves a fairly wealthy clientele in a suburb of central Pennsylvania. There is an entry fee and a monthly fee depending upon services and amenities offered. Entry fees range from \$72,500 to \$250,500. Monthly fees range from \$2,163 to \$3,918.

Participant Selection

Purposive criterion sampling was used in this study. This type of sampling is based on selecting individuals who meet a criterion. It ensures the sample includes only individuals of interest (Cozby, 2007). Twenty caregivers from the assisted living wing were selected ($N = 20$).

Caregivers. For the purposes of this study, the term “caregiver” encompassed individuals that provided dining (e.g., wait staff), environmental (e.g., housekeeping), health (e.g., nurses and physical and occupational therapists), and administrative services. Caregivers classified themselves as nurses (50%), directors (10%), activity coordinators (10%), housekeepers (5%), volunteers (5%), wait staff (10%), and therapists (10%). Specific tasks were categorized as administrative (8%), training (10%), medication assistance or supervision (20%), therapy (10%), transferring (27%), serving meals (22%), and custodial (2%). Number of tasks ranged from 1 to 5 ($M = 2.45$, $SD = 1.29$). Caregivers were full-time (60%), part-time (25%), or contract (10%) employees. The remaining participants were volunteers (5%). Years of employment at the facility ranged from 2 to 16 ($M = 5.75$, $SD = 3.33$). All caregivers identified themselves as female and Caucasian. Participants ranged in age from 23 to 58 ($M = 40$, $SD = 10.1$). Educational background included high school (15%), undergraduate (15%), graduate (10%), and nursing/therapy (60%) degrees.

Residents. A typical ALF resident is a person who is female, Caucasian, age 86, who has multiple health conditions (e.g., arthritis and high blood pressure), who is mobile, but needs assistance with approximately two ADLs, meal preparation, and medication management (Assisted Living Federation of America, 2009). For the purposes of this study, six female, Caucasian residents were selected. Residents were characterized as high cognitive functioning and in good physical health. Resident names have been changed to preserve the privacy of each individual. Detailed descriptions of each resident are provided in Appendix A. These

composites are presented to provide a glimpse into their cognitive and physical functioning, their relationships, and their hobbies/activities. Participants ranged in age from 80 to 89 ($M = 84$, $SD = 3.43$). Numbers of years in the facility were classified as less than 1 year (17%), 1 to 3 years (67%), and 3 or more years (17%).

Consent

Due to the nature of this study, consent was required from multiple people. The facility executive director served as a gatekeeper. The researcher arranged a meeting with the director and explained the purpose of the study (see Appendix B). Both parties agreed on the duration of the study and the least obtrusive observation sites. Confidentiality was ensured by not mentioning participants' and the facility's names in presentations and publications related to this study. Pseudonyms were created for participants. The director granted access and introduced the researcher to the caregivers and residents. Consent was obtained from observed caregivers and residents (see Appendices B).

Design

This study utilized a half block design where a group (e.g., assisted living individuals) is divided into two groups (e.g. caregivers and residents) and members from one group interact with and rate members of the other group (Kenny, Horner, Kashy, & Chu, 1992; Kenny et al., 2006). This study collected data from only caregivers (see Table 3.1).

In order to complete this half block design, all caregivers interacted with and rated the same residents (Kenny et al., 1992; Kenny et al., 2006). For example, caregivers 1 to 20 each interacted with and rated residents 1 to 6, but not vice versa. Thus, this study recorded six conversations initiated by each caregiver. In total, 120 caregiver-resident interactions were recorded and evaluated.

Table 3.1 *The Half-block Design for This Investigation*

	C's	C's	R1	R6	Actor	R1	R6	Actor	R1	R6	Actor
	age	ALF	Cues...	Cues	effect	Stereo...	Stereo.	effect	Lang...	Lang	effect
		beliefs			for			for			for
					cues.			stereo.			Lang
C1											
C2											
C3											
C4											
C5...											
C20											

Partner

effect

means

Note. C = Caregiver/Actor. Cues = Observable cues noted by coders. Stereo = Stereotypes. R = Resident/Partner. ALF = Assisted living facility stereotypes. Lang = Language

Procedures

Six residents were selected for these observations. These residents were selected from the existing residents in the facility using stratified random sampling. All efforts were made to select residents who lived in different parts of the wing and participated in different activities.

Before making observations, the 20 caregivers were given an initial survey (see Appendix D). In the survey, they assessed ALFs' ability to promote autonomy and sociability and provide their demographic information.

Afterwards, the caregivers were followed in order to observe them with the six residents. The first two minutes of resident-caregiver interactions were observed by one trained coder and

the researcher. Criteria for determining the start of an interaction segment as adjacency pairs that signal the initiation of typical conversations (TenHave, 1999). Adjacency pairs consist of two adjacent utterances in which different speakers each contribute utterances. For example, combinations of utterances used to initiate conversations include greeting-greeting or question-answer. Interactions will be coded for verbal and nonverbal features of age-adapted speech (Ryan et al., 1995; see Appendix C).

Within 48 hours of the observation, the caregivers were asked to complete another survey. In the second survey, they assessed how much they associated the resident observed in the conversation with the age-related stereotypes and provided information about their relationship history. These procedures were repeated until observations were made with and surveys were completed for all six residents.

In an effort to increase ecological validity, the recorded interactions were naturally occurring and unstructured. I did not encourage participants to engage in structured interactional activities with certain individuals. For example, if you assigned people to talk with two other participants, it may not be natural. Similarly, surveys were distributed after the fact so that questions related to stereotypes did not bias normally occurring interactions.

Coder training. Three undergraduate research assistants (RAs) were recruited to code caregiver-resident interactions. All RAs passed the Institutional Review board (IRB) quiz. The researcher had two, one hour meetings with all undergraduate RAs. The first meeting discussed the coding procedure for resident physiognomic, physique, and physical appearance cues. The second meeting discussed the coding procedure for verbal and nonverbal features of age-adapted speech. The researcher provided the coders a description of resident features (Appendix E) and

conversation measures (Appendix F) to aid in assessing target and conversation cues, respectively.

Training materials were created using videos, examples, and transcriptions from previous studies (Berry & McArthur, 1985; Caporael, 1981; Harwood, 2007; Hummert, 1994a; Ryan, Bourhis, & Knop; Williams, 2001). At the end of each meeting, the researcher provided all three RAs with training material to code (see Appendices G and H). This was done to determine the highest inter-rater reliability between all three coders to further code the target and conversation cues. Krippendorff's alpha (Krippendorff, 1978, 1987) was used to assess inter-coder reliability after each training exercise. All three coders demonstrated good reliability with a Krippendorff's alpha of .83 on the target cue training and .80 on the conversation cue training.

Conversation Measures and Survey Measures

All measurements were checked for internal consistency before summing into scores and using in the analysis. At minimum, Cronbach's alpha was used to estimate internal consistency, with acceptable cut-offs at alpha = .80 (Cronbach, 1970).

Partner cues. Coders judged the extent to which they observed that the resident exhibits age-related physiognomic ($M = 1.50$, $SD = 0.50$), facial structure ($M = 1.33$, $SD = 0.47$), physique ($M = 0.33$, $SD = 1.50$), personal appearance ($M = -1.83$, $SD = 0.37$), and hearing aid ($M = -0.50$, $SD = 1.51$) cues with single items. For all items except facial structure, higher scores represent older-age cues.

Age-adapted speech. Interactions were coded for age-adapted speech (Ryan et al., 1995). Psycholinguistic features fall into two main categories: verbal and nonverbal. Verbal features include actors' choices in vocabulary, grammar, forms of address, and topic management ($\alpha = .94$, $M = 1.78$, $SD = 0.38$). Nonverbal features include the five categories of nonverbal behavior (Knapp, 1978): paralinguistics, gaze, proxemics, facial expression, gestures, and haptics ($\alpha = .97$,

$M = 1.48$, $SD = 0.53$). The entire set of 10 items were averaged into one score ($\alpha = .95$, $M = 1.60$, $SD = 0.43$). Higher scores represent conversations with less age-adapted speech.

Resident stereotypes. Caregivers were asked to use a five point scale (*strongly disagree* = -2 to *strongly agree* = 2) to answer questions addressing six stereotypes about residents: independence, sociability, competence, wisdom, healthiness, and hearing proficiency. Three items represented independence, the ability to perform ADLs without assistance (e.g., Able to dress without assistance, $\alpha = .82$, $M = 1.02$, $SD = 0.97$). The second stereotype, sociability, was composed of four items describing social interactions (e.g., In contact with relatives, $\alpha = .98$, $M = 1.85$, $SD = 0.35$). Two items represented competence, linguistic ability and working memory (e.g., Speaks at a normal rate, $r = .69$). The fourth stereotype, wisdom, consisted of three items referring to practical knowledge and life experience (e.g., Advice giver, $\alpha = .84$, $M = .88$, $SD = 0.60$). The fifth stereotype, healthiness, was comprised of six items referencing being active and alert (e.g., Agile, $\alpha = .81$, $M = 1.17$, $SD = 0.74$). Three items represented hearing proficiency, the ability to hear speech without use of a hearing aid or repetition (e.g., Able to hear without a hearing aid, $\alpha = .71$, $M = 1.19$, $SD = 0.91$). All items (see Appendix D) were scored to indicate stronger associations with positive dimensions of the age-related stereotypes.

Relationship history. Caregivers were asked to use a five point scale (*strongly disagree* = -2 to *strongly agree* = 2) to report quality of contact with residents. The relationship history scale (e.g., I get along well with this person) consisted of six different statements. The items were averaged into a single score, with higher scores indicating more positive history ($\alpha = .90$, $M = .75$, $SD = 0.51$). The scale showed similar reliability to previous studies (ranging from .76 to .84, Harwood, Hewstone, Paolini, & Voci, 2005).

ALF stereotypes. Caregivers were asked to use a five point scale (*strongly disagree* = -2

to *strongly agree* = 2) to answer questions addressing six stereotypes about ALFs: ability to promote autonomy and ability to promote sociability. Five items represented the ability to promote autonomy (e.g., Promote freedom of action, $\alpha = .88$, $M = .15$, $SD = 0.77$). Two items represented the ability to promote sociability (e.g., Promote social interaction, $r = .59$). Higher scores indicate stronger associations with promoting autonomy and sociability. Previous studies show acceptable internal consistency ($\alpha = .93$, Imamoglu, 2007). Despite using the same items, this study had lower levels of internal consistency. This may be explained by the fact that the scale items were originally designed to assess the beliefs of community dwelling and institutionalized older adults about ALFs. Therefore, these items may not be appropriate for caregivers. Ideas like independence and sociability may mean something different for a resident and caregiver (Carder & Hernandez, 2004).

Workload. Caregivers were asked to report their quantitative workload. Quantitative workload was assessed with the number of tasks in a given shift. Number of tasks ranged from 1 to 5 ($M = 2.45$, $SD = 1.29$).

Demographics. Caregivers were asked to report their age, ethnicity, and gender.

CHAPTER FOUR

RESULTS

PASW Statistics 18 and BLOCKO were used to test the nine hypotheses and one research question. Linear mixed-effect modeling analyses were conducted to assess the influence of partner cues, ALF beliefs, and age on activation of age-related stereotypes, as well as age-related stereotypes, workload burden, and relationship history on the production of age-adapted speech. BLOCKO partitioned stereotype activation and language production variance into actor, partner, and relationship effects to determine which best explained the data.

Descriptive Statistics

Age-related Stereotypes and Relationship History

On average, caregivers associated residents with the positive dimension of age-related stereotypes: independent, sociable, competent, wise, healthy, and able to hear. Specifically, for independence, they reported that residents were able to dress without assistance ($M = 1.13$, $SD = 1.01$), to bathe without assistance ($M = 1.08$, $SD = 1.34$), and to move from place to place without assistance ($M = 0.84$, $SD = 1.01$). For sociability, caregivers rated residents as sociable ($M = 1.83$, $SD = 0.37$), in contact with relatives ($M = 1.88$, $SD = 0.32$), in contact with friends ($M = 1.83$, $SD = 0.37$), and not isolated ($M = -1.83$, $SD = 0.37$). In terms of competence, they described residents as speaking at a normal rate ($M = 1.91$, $SD = 0.29$) and remembering important information ($M = 1.88$, $SD = 0.32$). For wisdom, caregivers viewed residents as advice givers ($M = 0.88$, $SD = 0.69$), storytellers ($M = 0.91$, $SD = 0.65$), and opinion leaders ($M = 0.86$, $SD = 0.71$). In terms of health, caregivers identified residents as being active ($M = 0.66$, $SD = 1.40$), agile ($M = 0.62$, $SD = 0.99$), alert ($M = 1.39$, $SD = 0.97$), not feeble ($M = -1.68$, $SD = 0.61$), and not frail ($M = -1.68$, $SD = 0.61$). Last, for hearing, they reported residents' ability to

hear without a hearing aid ($M = 1.68, SD = 0.96$), without repetition of speech ($M = 1.11, SD = 1.21$), and without increased volume ($M = 0.79, SD = 1.23$).

In addition, caregivers positively evaluated quality of contact with residents. They reported getting along well with each resident ($M = 1.54, SD = 0.50$), feeling close to each resident ($M = 0.71, SD = 0.71$), feeling attached to each resident ($M = 0.36, SD = 0.48$), and being devoted to each resident ($M = 0.32, SD = 0.47$).

These findings suggest that caregivers of these residents in this ALF associated them with the positive dimensions of age-related stereotypes and positive time spent together. These results differ from the previous research on ALFs (Dobbs et al., 2008), which is addressed in the discussion chapter.

Resident cues. Residents were coded as having physiognomic cues indicating old age, with little variation. Physiognomic cues of old age included wrinkled skin, grey hair, and drooping eye lids ($M = 1.50, SD = 0.50$). Residents' facial structure included large, round eyes; a short, narrow nose, a large forehead, and a small chin ($M = 1.33, SD = 0.47$). Cues related to hearing aids, physique, and appearance showed greater variance. Residents' were often observed not using hearing aids ($M = -0.50, SD = 1.51$). There was also variability in residents' physique characteristics. On average, residents were coded as exhibiting low levels of a good posture, a confident gait, and movement without a mobility device ($M = 0.33, SD = 1.50$). On average, residents were described as having a well groomed, fashionable appearance consisting of brushed hair, brushed teeth, a clean face, clean hands, and a matching outfit ($M = -1.83, SD = 0.37$).

These findings indicate that these residents in this ALF have physiognomic cues consistent with the age-related stereotype literature (Hummert, 1994b). In contrast, residents in

this ALF have physique and physical appearance cues that are more commonly associated with community dwelling rather than institutionalized older adults (Hummert, 1994a; 1994b; Hummert et al., 1998).

Conversation cues. In general, caregivers were observed using normal speech with residents. For example, caregivers were evaluated as using complex vocabulary ($M = 1.73$, $SD = 0.44$), complex grammar ($M = 1.73$, $SD = 0.44$), formal names ($M = 1.88$, $SD = 0.32$), and varied topic selection ($M = 1.75$, $SD = 0.43$). Caregivers were also observed using varied intonation ($M = 1.52$, $SD = 0.60$), direct eye gaze ($M = 1.56$, $SD = 0.55$), moderate expression ($M = 1.39$, $SD = 0.58$), moderate gesturing ($M = 1.38$, $SD = 0.58$), social-polite touch ($M = 1.58$, $SD = 0.54$), and normal levels of personal space ($M = 1.45$, $SD = 0.55$).

This finding suggests caregivers in this ALF use normal speech when they initiate conversations with these residents. This result differs from the NH resident-caregiver literature (Ashburn & Gordon, 1981; Carporael, 1981; Nussbaum, 1990; Ryan et al., 1995).

Hypothesis Testing and Research Question

Hypotheses 1-6: Predicting Stereotyping

Hypotheses 1 through 4 predicted that residents who have more physiognomic, physique, and physical appearance cues indicating greater age are associated more strongly with the negative dimensions of age-related stereotypes. Hypotheses 5 and 6 predicted that caregivers who are younger and who hold more negative stereotypes about ALFs' ability to promote autonomy and sociability associate more negative dimensions of age-related stereotypes with residents.

To test these relationships, a mixed model analysis was conducted in which caregivers' assessments of residents were treated as repeated measures, and the five observable cues,

caregivers' age, and caregivers' judgments of the ALF's promotion of autonomy and sociability were treated as fixed, independent variables. The mixed model was run for four of the six stereotypes.

The lack of variance in caregivers' ratings of sociability and competence impeded statistical testing, but provided an answer to the Hypotheses. The caregivers' characteristics and the residents' cues were not related to ratings of sociability and competence. Only the results for stereotypes of independence, wisdom, healthiness, and hearing proficiency are provided below.

Independence. The results showed that caregivers associated residents who exhibited fewer physiognomic cues of old age (e.g., wrinkles, grey hair, and eye droop), *coefficient* = -0.80, *SE* = 0.10, $t(40.74) = -8.10$, $p < .00$, older facial structure, *coefficient* = -1.48, *SE* = 0.29, $t(51.20) = -5.13$, $p < .00$, fewer infirm physique characteristics (e.g., poor posture and use of mobility device), *coefficient* = -0.36, *SE* = 0.08, $t(19.60) = -4.80$, $p < .00$, with less visible hearing aids, *coefficient* = 0.59, *SE* = 0.16, $t(25.20) = 3.64$, $p < .00$, more strongly with the positive dimension of the independence stereotype. Residents' appearance was unrelated to the independence stereotype, *coefficient* = -0.01, *SE* = 0.28, $t(45.48) = -0.05$, *ns*. Caregivers' age, *coefficient* = 0.00, *SE* = 0.00, $t(37.57) = -0.10$, *ns*, ALF promotion of autonomy, *coefficient* = 0.04, *SE* = 0.08, $t(37.57) = 0.48$, *ns*, and ALF promotion of sociability, *coefficient* = -0.01, *SE* = 0.04, $t(37.57) = -0.14$, *ns*, were unrelated to the independence stereotype.

Wisdom. The results indicated that caregivers associated residents who exhibited more physiognomic cues of old age, *coefficient* = 1.03, *SE* = 0.15, $t(39.55) = 6.91$, $p < .00$, and fewer infirm physique characteristics, *coefficient* = -0.10, *SE* = 0.04, $t(31.86) = -2.84$, $p < .01$, more strongly with the positive dimension of the wisdom stereotype. Residents' facial structure, *coefficient* = -0.51, *SE* = 0.29, $t(44.90) = -1.76$, *ns*, use of hearing aids, *coefficient* = -0.16, *SE* =

0.13, $t(34.21) = -1.18$, *ns*, and appearance, $coefficient = 0.30$, $SE = 0.18$, $t(65.56) = 1.61$, *ns*, were unrelated to the wisdom stereotype. Caregivers who were younger associated residents more strongly with the positive dimensions of the wisdom stereotype, $coefficient = -0.01$, $SE = 0.00$, $t(100.88) = -2.65$, $p < .01$. ALF promotion of autonomy, $coefficient = -0.09$, $SE = 0.09$, $t(100.88) = -1.02$, *ns*, and sociability, $coefficient = -0.06$, $SE = 0.16$, $t(100.88) = -0.38$, *ns*, were unrelated to the wisdom stereotype.

Healthiness. The results explained that caregivers associated residents who had fewer infirm physique characteristics, $coefficient = -0.39$, $SE = 0.04$, $t(19.43) = -9.74$, $p < .00$, and well-groomed fashionable appearance, $coefficient = -0.48$, $SE = 0.18$, $t(43.70) = -2.70$, $p < .01$, more strongly with the positive dimension of the healthiness stereotype. Residents with less visible hearing aids, $coefficient = 0.22$, $SE = 0.11$, $t(38.29) = 1.93$, $p = .06$, were associated more strongly with the positive dimension of the healthiness stereotype, but this finding was not statistically significant. Physiognomic cues of old age (e.g., wrinkles, grey hair, and eye droop), $coefficient = -0.06$, $SE = 0.13$, $t(44.67) = -0.50$, *ns*, and facial structure, $coefficient = -0.23$, $SE = 0.24$, $t(60.45) = -.92$, *ns*, were unrelated to the healthiness stereotype. Caregivers' age, $coefficient = 0.00$, $SE = 0.00$, $t(23.13) = 2.06$, *ns*, ALF promotion of autonomy, $coefficient = 0.04$, $SE = 0.04$, $t(23.13) = 1.25$, *ns*, and ALF promotion of sociability, $coefficient = 0.09$, $SE = 0.06$, $t(23.13) = 1.36$, *ns*, were unrelated to the healthiness stereotype.

Hearing proficiency. Mixed model analysis was performed for the hearing proficiency stereotype. The initial analysis found that residents' facial structure and caregivers' information (e.g., age and ALF beliefs) were invariant across this stereotype. In order to test the other estimates, these variables were removed and the model was rerun. The results showed that caregivers associated residents who exhibited more physiognomic cues of old age, $coefficient = -$

0.60, $SE = 0.16$, $t(39.14) = -3.83$, $p < .00$, and more visible hearing aids, $coefficient = -0.31$, $SE = 0.06$, $t(36.43) = -5.18$, $p < .00$, less strongly with the positive dimension of the hearing proficiency stereotype. Residents who had fewer infirm physique characteristics, $coefficient = -0.01$, $SE = 0.01$, $t(19.10) = 1.83$, $p < .08$, were associated more strongly with the positive dimension of the hearing proficiency stereotype, but this finding was not statistically significant. Appearance, $coefficient = -0.10$, $SE = 0.22$, $t(61.91) = -0.46$, ns , was unrelated to the hearing proficiency stereotype.

Hypothesis summary. These paragraphs summarize the results for each hypothesis. Overall, the hypotheses predicted that observable features of the residents and qualities of the caregivers bias caregivers to associate residents with more negative dimensions of age-related stereotypes. The descriptive statistics indicated that all of the residents were associated with positive stereotypes, thus the results should be interpreted as weaker associations with positive stereotypes. In addition, the results showed that sociability and competence showed so little variance across residents that the hypothesized factors could not further explain variance in these two stereotypes.

For the remaining four stereotypes, the results provided mixed support for Hypotheses 1, 2, and 4, but full support for Hypothesis 3. Aged physiognomic cues (wrinkled skin, grey hair, and eye droop, Hypothesis 1) were related to weaker ratings of independence and hearing proficiency, to stronger ratings of wisdom, and unrelated to ratings of healthiness. A youthful facial structure (large, round eyes; short, narrow nose, large forehead, and small chin, Hypothesis 2) was related to weaker ratings of independence as predicted, but unrelated to ratings of wisdom. More infirm physique characteristics (poor posture and use of a mobility device, Hypothesis 3) were related to weaker ratings of independence, wisdom, healthiness, and hearing

proficiency. A poorly groomed, unkempt, unfashionable appearance (unbrushed hair, unbrushed teeth, unshaved, dirty face, dirty hands, and mixed match outfits, Hypothesis 4) was related to weaker ratings of healthiness, but was unrelated to ratings independence, wisdom, and hearing proficiency. Although infirm physique characteristics were the most consistent predictor of biased stereotypes, it was not the strongest predictor for any of the stereotypes.

Hypotheses 5 and 6 focused on caregiver factors, which were not supported by the findings. Contrary to prediction, the results above indicated that caregivers who were younger associated residents more strongly with the positive dimension of the wisdom stereotype. Moreover, caregiver age was unrelated to ratings of independence, healthiness, and hearing proficiency. Thus, Hypothesis 5 was not supported. Moreover, caregivers' ALF beliefs were unrelated to ratings of independence. Thus, Hypothesis 6 was not supported.

Hypotheses 7-9: Predicting Age-adapted Speech

Hypotheses 7-9 predicted that caregivers who associate residents with the negative dimensions of age-related stereotypes, have higher workloads, and negative evaluations of previous contact with residents use more features of age-adapted speech. To test these relationships, a mixed model analysis was conducted in which caregivers' conversation cues were treated as repeated measures, and caregivers' assessments of residents', workload, and relationship history were treated as fixed, independent variables.

The descriptive statistics indicated that all caregivers' language showed aspects of normal speech, thus the results showed which stereotypes were related to fewer features of normal speech. Only one stereotype predicted age-adapted speech: Caregivers were observed using fewer features of normal speech with residents who were associated less strongly with the positive dimension of the hearing proficiency stereotype, $coefficient = 0.23$, $SE = 0.05$, $t(63.32) =$

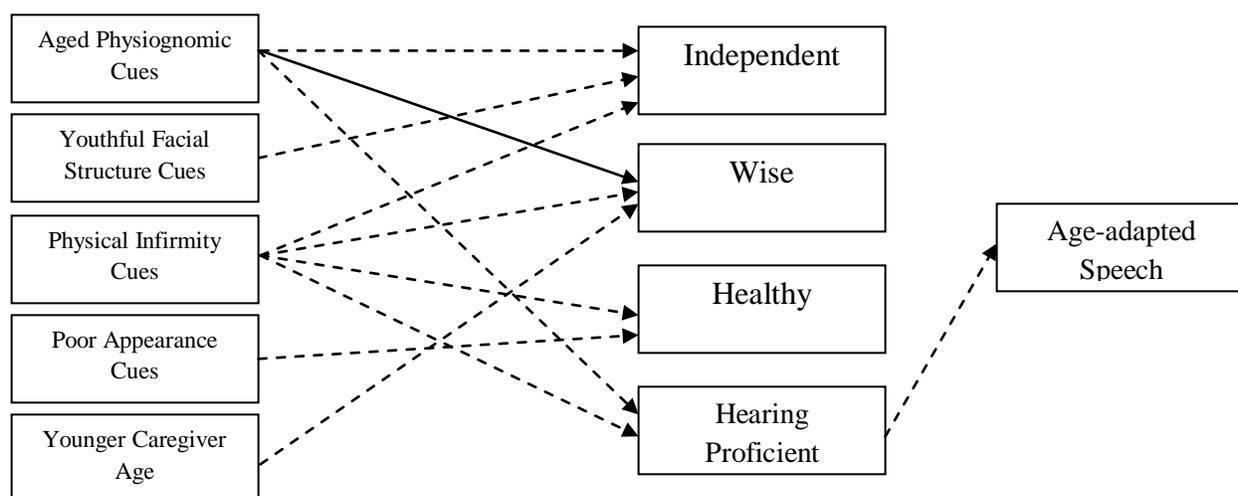
4.85, $p < .00$. Language production was unrelated to the independence, $coefficient = 0.04$, $SE = 0.04$, $t(57.10) = 0.98$, ns , wisdom, $coefficient = 0.05$, $SE = 0.07$, $t(45.94) = 0.76$, ns , and healthiness stereotypes, $coefficient = 0.02$, $SE = 0.05$, $t(46.33) = 0.51$, ns . These findings provide limited support for Hypothesis 7.

Neither caregiver workload, $coefficient = -0.01$, $SE = 0.02$, $t(20.69) = -0.52$, ns , nor relationship history, $coefficient = 0.00$, $SE = 0.10$, $t(34.05) = 0.02$, ns , were associated with language production. Thus, Hypotheses 8 and 9 were not supported.

The Empirical Model of Age-adapted Speech

Based on these findings, residents' cues and caregiver age predispose caregivers to activate some, but not all age-related stereotypes. Specifically, residents with more aged physiognomic cues were associated with weaker ratings of independence and hearing proficiency, and to stronger ratings of wisdom. A more youthful facial structure was related to weaker ratings of independence. Residents with more infirm physique characteristics were related to weaker ratings of independence, wisdom, healthiness, and hearing proficiency. A poorly groomed, unkempt, unfashionable appearance was related to weaker ratings of healthiness. Younger caregivers associated residents more strongly with the positive dimension of the wisdom stereotype. Of the four stereotypes tested, only the hearing proficiency stereotype predicted age-adapted speech. The final model is shown in Figure 4.1.

Figure 4.1 The Empirical Model of Age-adapted Speech



Note. Dashed lines indicate negative relationships, and solid lines indicate positive ones.

The Social Relations Model

Research question 1 explores which effect explains the most variance in caregiver-resident interactions. A small amount of caregiver (actor) variance is present in the ratings of the six age-related stereotypes, ranging from 0% to 8%. Agreement of resident (partner) cues is apparent in the amount of partner variance in the data. For example, 98% of the variance in ratings of sociability was partner-based. Similarly, consensus was found for healthiness and hearing proficiency; approximately 72% and 65% of the variation in ratings on these stereotypes was due to the partner being rated. Less agreement was found for wisdom (48%), independence (46%), and competence (32%). Thus, caregivers tended to agree on which residents were independent, social, competent, wise, healthy, and hearing proficient and which residents were not. The proportion of relationship variance is also quite large, ranging from 2% to 60% of the variance for the age-related stereotypes. The relationship effect measures the degree to which a caregiver (actor) uniquely perceives a given resident (partner). Thus, the large

amount of relationship variance indicates that the caregivers had idiosyncratic views of particular residents.

In addition to partner-variance in the stereotypes, a large amount of resident (partner) variance was present in conversation cues during caregiver-resident interactions (61%). Thus, caregivers tended to initiate conversations with particular residents using less features of normal speech. Smaller amounts of caregiver (18%) and relationship (22%) variance were present in conversation cues during caregiver-resident interactions. The relative variance partitioning for the study is presented in Table 4.1.

Table 4.1 *Relative Variance Partitioning*

Variable	Actor	Partner	Relationship
Independence Stereotype	.00	.46	.54
Sociability Stereotype	.00	.98	.02
Competence Stereotype	.08	.32	.60
Wisdom Stereotype	.07	.48	.45
Healthiness Stereotype	.01	.65	.35
Hearing Proficiency Stereotype	.00	.72	.27
Conversation Cues	.18	.61	.22

Qualitative Highlights

As described in the methodology, coders were encouraged to take notes regarding specific examples of age-adapted speech. In reviewing these specific examples, I noticed that age-adapted speech (e.g., increased volume, slower rate, increased gesturing, and less personal space) was often prompted by the resident. For example, a caregiver asked a resident about what time her daughter was coming to visit. A summary/paraphrase of events is as follows:

Caregiver: What do you have planned for today?

Resident: My daughter is supposed to visit.

Caregiver: What time are you expecting her?

Resident: (leaning forward and turning towards caregiver) What?

Caregiver: (moving closer and turning towards resident speaking louder and slower)

W-H-A-T T-I-M-E A-R-E Y-O-U E-X-P-E-C-T-I-N-G H-E-R?

Resident: Oh, after she drops my grandkids off at school. Probably, around 10ish.

The caregivers in this ALF waited for a cue such as “come again” or “what did you say.” This finding provides additional support for partner effects (features of residents) explaining the most variance in caregiver-resident interactions, as well as the needs-adapted explanation for age-adapted speech.

CHAPTER FIVE

DISCUSSION

The goal of this thesis was threefold. First, this study sought to elaborate upon previous research studying activation of age-related stereotypes and production of age-adapted speech. Second, this project used a half-block design to examine whether actor (workload burden), partner (beliefs about residents), or relationship (relationship history) effects predicted age-adapted speech. Finally, this project contributed to the literature on caregiver-resident interactions in the ALF context.

Overall the results showed limited and mixed support for cue-activated stereotypes. In addition, only one stereotype, hearing proficiency, was associated with greater use of age-adapted speech. Of the three possible patterns of age-adapted speech – caregiver driven, resident driven, or relationship driven – the findings showed that features of residents explained the most variance in caregiver-resident interactions. This finding fits both the needs-adapted and identity-driven explanations for age-adapted speech. It does not provide support for caregiver effects (e.g., poor monitoring) or dyadic ones (e.g., relationship history). The rest of this chapter discusses these findings of this thesis and their implications in greater detail.

Theoretical Implications

This study examined three factors that influence cue-driven, stereotype activation (Brewer, Dull, & Lui, 1981; Hummert, 1990; Hummert, 1994b). These factors included the partner's cues (facial features, physique, and physical appearance), the actor's cognitive biases (caregiver age), and contextual (ALF promotion of autonomy and sociability) elements.

When ASI (Hummert, 1994b), CPM (Ryan et al., 1986), and CAT (Giles et al., 1987) were applied in field some aspects of the theories did not hold. First, two stereotypes-sociability

and competence-did not vary. Second, only one activated stereotype was associated with speech production.

Stereotype Activation

In the existing literature on age-related encounters, six stereotypes appear the most often. These include independence, sociability, competence, wisdom, healthiness, and hearing proficiency. In this study, two stereotypes, sociability and competence, did not vary. Caregivers' rated all residents as sociable, in contact with friends and relatives, and not isolated. For competence, they unanimously described residents as speaking at a normal rate and remembering important information. There are at least two reasons for this finding: (a) sample selection and (b) characteristics of ALF residents.

In order to meet the half-block criterion of interacting with the same twenty caregivers, residents had to be involved in various activities. This sampling design could have generated a sample high in sociability and competence.

In addition, high sociability and competence ratings are more commonly associated with community dwelling rather than institutionalized older adults (Hummert, 1994a; 1994b; Hummert et al., 1998). The distinguishing factors between NH and ALF residents include cognitive status and number and type of ADLs. The prevalence of cognitive impairment is higher among NH residents than it is among ALF residents. Overall, NH residents are 1.3 times more likely to be cognitively impaired than are those found in ALFs. Those ALF residents with some level of cognitive impairment would only be considered moderately or mildly impaired (Cohen & Miller, 2000). Cognitive impairment is not an indication of education, however. There is little difference in the education level between NH and ALF residents. For example, NH versus ALF residents with less than high school degree are 17% and 11%, high school degree

22% and 27%, technical/trade/business 12% and 7%, some college 17% and 20%, and college degree 32% and 35% (Cohen & Miller, 2000).

Once in the system, residents typically move from an ALF to a higher level of care such as a NH at some point (Phillips, Munoz, Sherman, et al., 2003). Among those who moved to another setting, the need for more care (e.g., degree of cognitive decline and assistance with more ADLs) was the most commonly cited reason for leaving (Phillips et al., 2000). On average, ALF residents need help with approximately two ADLs (Assisted Living Federation of America, 2009). Bathing (64%) and dressing (39%) are the most common ADLs. In comparison, NH residents required assistance with approximately four ADLs. While bathing (99%) and dressing (90%) are also the most common the majority of residents require assistance using the toilet (83%) and eating (51%) (Cohen & Miller, 2000). Thus, residents in ALFs may generally be higher in sociability and competence than those in NHs, the setting studied most often in previous research. The next sections discuss the rest of the cue-stereotype findings.

Physique cues. Residents in this ALF varied the most in terms of physique cues. Residents' abilities ranged from having a confident gait to being dependent on a walker. As predicted, residents with more infirm physique characteristics (poorer posture and use of/reliance on a mobility device) were related to weaker ratings of independence, wisdom, healthiness, and hearing proficiency. This finding was consistent with older adult stereotype literature (Hummert, 1990; Hummert 1994b; Hummert et al., 1995, Schmidt & Boland, 1986).

Physiognomic cues. Residents in this ALF were unanimously coded as having physiognomic cues (wrinkled skin, grey hair, and eye droop) indicating old age. As predicted, more aged physiognomic cues were related to weaker ratings of independence and hearing proficiency and to stronger ratings of wisdom. This finding was consistent with facial cue-

driven, stereotype activation literature (Hummert, 1994a; Hummert, Garstka, & Shaner, 1997). Counter to prediction, aged physiognomic cues were unrelated to ratings of healthiness.

A youthful facial structure (large, round eyes; short, narrow nose, large forehead, and small chin) was related to weaker ratings of independence as predicted (Berry & McArthur, 1985), but unrelated to ratings of wisdom. Previous studies of the “baby faced phenomenon” (Berry & McArthur, 1985, 1988) have examined facial features of younger adults that activate young adult stereotypes. This is the first study to researcher’s knowledge to examine this phenomenon in older adults.

Physical appearance cues. A poorly groomed and unfashionable appearance (unbrushed hair, unbrushed teeth, unshaved, dirty face, dirty hands, and mixed match outfits) was related to weaker ratings of healthiness (Hummert, 1994b). However, grooming and dress cues were unrelated to ratings of independence, wisdom, and hearing proficiency. This may be explained by the residents sampled. The majority of residents in this ALF were well groomed and fashionable dressers. Even residents requiring assistance dressing wore make-up and accessories. These physical appearance cues are more commonly associated with community dwelling rather than institutionalized older adults (Hummert, 1994a; 1994b; Hummert et al., 1998).

Overall, the results provide limited and mixed support for ASI (Hummert, 1994b) and CPM (Ryan et al., 1986). These findings suggest something, in addition to cues, may influence activation of age-related stereotypes in repeated caregiver-resident interactions.

Relationship effect. Based on the age-related stereotype literature, cues should drive stereotypes, but did not consistently in this study. One possible explanation for physiognomic, physique, and physical appearance cues activating some, but not all age-related stereotypes is

relationship effect. Relationship effect measures the degree to which a caregiver (actor) uniquely perceives a given resident (partner). Previous cue-driven stereotype activation studies (Hummert, 1994a; Hummert, Garstka, & Shaner, 1997) used photograph-age and photograph-stereotype sorting tasks to investigate both positive and negative stereotypes of older adults. The current study examined caregivers' ratings of individuals they interact with on a daily basis. Through repeated interactions, these caregivers have a more in-depth knowledge of residents. This level of knowledge is greater than that which can be ascertained from a photograph indicating whether or not an individual possesses certain cues. By having an in-depth knowledge of residents, caregivers may not stereotype in the presence of contradictory information (e.g., residents possessing age-related cues).

Age as an actor bias. Caregiver age only predicted activation of one stereotype. Contrary to prediction, caregivers who were younger associated residents more strongly with the positive dimension of the wisdom stereotype. This finding suggests that younger people who have opportunities for frequent contact with older adults (e.g., caregivers) may be able to form more complex schemas. Moreover, if that contact is positive, they may form richer and more positive schemas about older adults (Hummert, 1994b). One positive older-adult stereotype is "the perfect grandparent" (Hummert, 1990, 1994a; Hummert et al., 1994). "The perfect grandparent" is described as wise, intelligent, and knowledgeable. Similarly, younger caregivers may look up to residents as a parent or grandparent-like figure. Residents have had more life experiences and may serve as knowledge sources for their younger caregivers (e.g., questions regarding relationships and childrearing).

Age salience as a context cue. Caregivers' ALF beliefs were unrelated to ratings of independence. This finding does not provide support for features of the actor or his/her

environment influencing activation of age-related stereotypes (Burgoon et al., 1995).

Previous studies of NHs, ALFs, and homes, identified ALFs as a middle ground. Common descriptions of ALFs included “help if needed,” “some independence,” and “some loss of control” (Imamoglu, 2007). This context may not have cues that are strong enough to activate positive or negative stereotypes. In addition, the scale items adapted for this study have been used to assess the beliefs of community dwelling and institutionalized older adults about ALFs. This scale may not translate well to caregivers, because independence may mean something different for a resident and caregiver (Carder & Hernandez, 2004).

Stereotypes and Speech Production

This study examined four possible explanations of age-adapted speech. These explanations included activation of age-related stereotypes (meeting residents needs or caregiver identity protection), individual differences (workload burden), and relationship history. As stated earlier, the biggest difference between the thesis findings and previous research is that only stereotype, hearing proficiency, was associated with use of age-adapted speech. Caregivers were observed using fewer features of normal speech with residents who were associated less strongly with the positive dimension of the hearing proficiency stereotype. There are at least four reasons for this finding: (a) different methods, (b) resident needs, (c) workload burden, and (d) relationship history.

Different methods. Previous stereotype activation and speech production studies (Hummert, 1994a; Hummert et al., 1997; Hummert et al., 1998) used photographs of older adults across different age groups (e.g., young-old, middle-old, or old-old) and contexts (e.g., hospital or community context) to investigate positive and negative stereotypes associated with and oral messages directed to the older adult in that photograph. Documenting observations within their

naturally occurring environment provides greater insight into caregiver-resident interactions with individuals that they care for on a daily basis.

Meeting residents' needs. Stereotype-driven speech serves as a means to meet the resident's needs (Coupland et al., 1988) and to accentuate caregiver-resident differences (Coupland et al., 1988). In this case, hearing challenges may be considered an inability of particular resident. Thus, it may be that when the hearing proficiency stereotype was activated, caregivers used more age-adapted speech as a mean to meet their perceptions of that resident's needs (Coupland et al., 1988; Hummert, 1994b, Ryan et al., 1986). This finding fits the needs-adapted explanation for age-adapted speech, suggesting that caregivers in this ALF recognize cues on an individual basis and modify speech to accommodate a particular resident's need.

Workload burden. Caregiver workload was not associated with language production. Workload can be considered as quantitative, the number of people and projects an employee is responsible for over a given period of time (Beehr & Newman, 1978; Cooper & Marshall, 1976). Quantitative workload is exacerbated by high turnover and inadequate staffing (Miller, Griffin, & Hart, 1999). Unlike other ALFs (American Association of Homes and Services for the Aging, 2002; NCAL, 2001), the ALF understudy has high job retention and ample staffing. The average number of years of employment at this facility is approximately six years. On the state level, the number of registered nurse (RN) hours per resident per day is much higher than average. The number of licensed practical or vocational nurse (LPN/LVN) hours per resident per day is higher than average. Licensed staff hours per resident per day is much higher than average. In addition, the facility is not filled to maximum capacity. There are currently 30 beds designated for residents requiring moderate amount of assistance. This number could be doubled if two residents were assigned to one room. Low turnover rate, ample staffing, and a manageable

number of residents may reduce quantitative workload burden.

Workload may also be defined as qualitative; qualitative workload burden refers to the difficulty of work due to lack of experience or skills (Beehr & Newman, 1978; Cooper & Marshall, 1976). In contrast to previous studies of ALF employees (Hawes, Phillips, & Rose, 2000), caregivers in this facility were educated and highly trained. Approximately 85% of caregivers had an advanced degree. In addition, this ALF provided monthly on-line training modules through a senior care eLearning service. A background in long-term care and opportunities for continuing education may make employees better able to handle the diverse demands of their job.

In the case of caregivers in this ALF, quantitative and qualitative workload (Purk & Lindsay, 2006) did not prevent them from monitoring their language and adjusting their speech to particular residents (Burgoon et al., 1995).

Relationship history. Relationship history was not associated with language production. This study defined relationship history as quality of contact with residents. The quality of previous interactions has been found to be related to subjects' attitudes toward and perceptions of elderly individuals (Knox, Gekoski, & Johnson, 1986; Robb, 1979; Rose-Colley & Eddy, 1988; Fox & Giles, 1993). Caregivers in this ALF positively evaluated quality of contact with residents. They reported getting along well with, feeling close to, feeling attached to, and being devoted to each resident. These findings differ from the previous research on ALFs (Dobbs et al., 2008, Williams, 2009). Relationships across the continuum of care will be discussed in directions for future research.

Methods Implications

This thesis utilized a half-block design (Kenny et al., 1992; Kenny et al., 2006) to

determine how much of the total variance in caregiver-resident interactions can be explained by actor, partner or relationship effects. By each caregiver interacting with each resident, it was possible to determine whether a given caregiver used age-adapted speech with all residents, only residents with age-related cues, or with only particular residents with age-related cues. Previous studies of age-adapted speech had focused solely on positive and negative stereotypes (partner effect) leading to normal or age-adapted speech, respectively (Hummert, 1994b; Ryan et al., 1986). This study design allowed for alternative predictors of normal or age-adapted speech: caregiver workload burden (actor effect) and caregiver-resident relational history (relationship effect) to be examined. To the researcher's knowledge, this study is the first of its kind to use the SRM to examine what predicts age-adapted speech.

BLOCKO analyses revealed partner effect or features of the residents explained the most variance in caregiver-resident interactions. This finding is consistent with ASI (Hummert, 1994b), CPM (Ryan et al., 1986), and CAT (Giles et al., 1987). For example, conversations initiated with residents associated with hearing challenges contained less features of normal speech. This finding suggests that caregivers recognize cues on an individual basis and modify speech to accommodate a particular resident's need (Coupland et al., 1988). This also suggests, however, there is not convergence or idiosyncratic modification within a dyad. This suggests that accommodation as would be seen in CAT (Giles et al., 1987) is not occurring; rather we may be seeing effects of the training provided to all the caregivers.

Despite smaller amounts of actor and relationship variance in caregiver-resident interactions, future studies should continue to examine these alternative explanations. The ALF under study serves an exemplary formal care facility. ALFs are typically characterized by high turnover, low staffing, and inadequately trained caregivers (American Association of Homes and

Services for the Aging, 2002; Hawes et al., 2000; NCAL, 2001). Thus, the amount and difficulty of work (Purk & Lindsay, 2006) may prevent caregivers from monitoring their language and adjusting their speech to particular residents (Burgoon et al., 1995). In addition, ALFs plagued by high turnover, low staffing, and inadequately trained caregivers may not promote caregiver-resident socialization. This may lead to caregivers negatively evaluating time spent with residents.

Practical Implications

The goal of ALFs is to enable residents to maintain independence by promoting autonomy, dignity, and personal choice (NCAL, 2001). The ALF understudy was successful in achieving this goal and overcoming the problems encountered in traditional NHs. For example, caregivers associated residents with the positive rather than negative dimension of age-related stereotypes: independent, sociable, competent, wise, healthy, and able to hear. In terms of rating interactions, caregivers positively evaluated quality of contact with residents. Last, caregivers were observed using normal rather than age-adapted speech with residents. This ALF serves an exemplary formal care facility. The next section describes this ALF's efforts to identify and accommodate specific resident's needs, promote caregiver-resident socialization, and decrease quantitative and qualitative workload burden. Additional architectural and programming suggestions are provided.

Effective Facility Practices

Need-based accommodation. Caregivers in this ALF participate in monthly training modules that address long-term care issues. An example module includes the need for caregivers to perform individual assessments of older adult needs rather than relying on age-related stereotypes (Ryan, Meredith, MacLean, & Orange, 1995). Thus, caregivers in this ALF are

trained to recognize cues on an individual basis and modify speech to accommodate a particular resident's need.

Relationship history. To reinforce this training, a name plate and bio board was located on the wall outside each resident's room. Bio boards consisted of past and present pictures of residents. Often family pictures and stickers/scrapbook materials related to resident hobbies were used to decorate the boards. The boards allowed caregivers to learn more about each resident and view each resident as an individual rather than by his or her condition. In relation to the bio boards, this ALF's mission statement is devoted to fostering a sense of community amongst caregivers and residents. As a result, caregivers are encouraged to socialize with residents about topics other than health. Caregiver-resident conversations about non-care related topics may lead to caregivers positively evaluating time spent with residents.

Workload burden. This ALF's mission statement is also dedicated to providing a supportive working environment for employees. This may be seen in its competitive benefits, flexible work hours (e.g., part-time, full-time, and shift work), caregiver-resident practices, and interdisciplinary care team. Previous studies have identified these factors as contributing to increased organizational commitment, and consequently high employee retention rates (Matheiu & Zajac, 1990; Mowday, Steers, & Porter, 1979; Price & Mueller, 1981). In turn, high retention rates may reduce quantitative workload.

Previous studies suggest caregiver-resident socialization improves quality of care for residents, as well as the quality of the work environment for employees (Barba, Tesh, & Courts, 2002). As described above, this ALF promotes caregiver-resident relationships. Employee participation in decision-making is also associated with positive effects on organizational commitment (Banaszak-Holl & Hines, 1996; Schaefer & Moos, 1996). Similar results have been

found in health care settings involving nursing staff in patient care planning (Banaszak-Holl & Hines, 1996). This ALF has an interdisciplinary care team that meets three times a week to discuss changes in each resident's health status. The interdisciplinary team consists of the facility administrator, director of health services, director of nursing, head nurse, and therapists. Each member of the team had input in each resident's health maintenance.

In regards to reducing qualitative workload burden, this ALF provided monthly on-line training modules described above. These opportunities for continuing education may equip employees with effective practices in long-term care.

Architecture and activities. Other ways to promote sense of community and involvement in community issues include facility layout and resident activities. This ALF transformed the former nursing station to an open area with the intention of creating a more home than institution-like atmosphere. Activities such as the resident newsletter and monthly resident council meeting alert residents to relevant issues and provide a forum to discuss concerns, complaints, and suggestions. There were two ways that residents could get involved in these activities. They could personally decide to participate in these activities. The facility's physician could also prescribe these activities for residents. Medical prescriptions for social activities may be an interesting avenue for future research.

ALFs attempt to promote resident autonomy, dignity, and personal choice; age-adapted speech presents a direct challenge to this philosophy. Thus, understanding effective ALF practices to avoid age-adapted speech has implications for effective caregiver-resident communication in general and successful ALFs specifically.

Limitations and Future Research

Limitations

The limitations within this study include the resident sample, the measurement items, and documentation of resident-caregiver interactions. A good sample must be large enough to permit reasonable analysis of data and representative of the population from which it is drawn. A total of twenty caregivers (83% of caregivers) and six residents (20% of residents) were selected. This small sample size made it more difficult to detect significant results and to have variation in ratings of sociability and competence. All efforts were made to select residents who lived in different parts of the wing and participated in different activities. Even though only six residents were observed, these six residents fit the description of a typical ALF resident (Assisted Living Federation of America, 2009).

Second, measurement issues included problematic stereotype items. Since residents were characterized as high cognitive functioning, actively involved in facility activities, and in good physical health, some resident stereotype items were too extreme. Problematic items included measures of competence, wisdom, sociability, and independence. For example, the ability to process complex language had to be removed as a measure of competence because of its negative effects on the scale's alpha. There was little to no variation in caregiver's perceptions of residents' ability to process complex language and remember important information. As for wisdom, caregivers unanimously, strongly disagreed that residents were naïve, senseless, or foolish. Reclusiveness had to be removed as a measure of sociability because of its negative effects on the scale's alpha. Due to the study design, residents had to interact with twenty caregivers. Therefore, these residents would not be considered reclusive. Lastly, the residents in this ALF did not require assistance eating and using the toilet. These ADLs are reflective of greater physical decline and may be more characteristic of older adults in

NHs that require around-the-clock care. These items were adapted from the most commonly occurring traits in the existing literature on age-related stereotypes.

Third, due to the nature of ALFs and older adults as a protected research population, videotaping interactions was not allowed. As a result, a trained coder and the researcher took detailed notes while observing interactions. This procedure was open to many problems and biases, since it can be difficult to keep track of all the sequential messages exchanged. In this study, both verbal and nonverbal features were recorded. Documenting both features simultaneously can be difficult; it was possible for the observers to miss something. Unlike video recordings that can be re-watched and coded several times, observations occurred in real time. Each observation was a onetime occurrence.

Directions for Future Research

The results from this study provide next steps in caregiver-resident communication. There are several future studies of age-adapted speech and the ALF context one can pursue with the foundation of this study. The following outlines such a plan for communication scholars and the ALF community.

Different types of ALFs. The ALF in which the study was conducted is part of a continuing care retirement community. It is a private pay institution that participates in Medicare. This not-for-profit facility serves a fairly wealthy clientele. There are currently 30 beds designated for residents requiring moderate amount of assistance. This number could be doubled if two residents were assigned to one room. In terms of employees, the ALF understudy has high job retention and ample staffing. The number of RN hours, LPN/LVN hours, and licensed staff hours per resident per day is much higher than the state average.

Future studies should employ the same methodology described in this thesis in a larger, for-profit facility that participates in Medicare and Medicaid. Larger, for-profit, Medicaid ALFs may be characterized by high staff turnover rates (American Association of Homes and Services for the Aging, 2002; NCAL, 2001). High staff turnover interrupts the continuity of resident care, resulting in workload burden and resentment among staff who must assume additional responsibilities (Banaszak-Holl & Hines, 1996; Cohen-Mansfield, 1997). Different types of ALFs will provide insight into alternative predictors of age-adapted speech including workload burden and relationship history.

Observations in ALFs. This project hoped to stimulate future studies of the ALF context and effective facility practices. Ethnographic and fieldwork studies are well suited for the examination of the underexplored ALF context, as well as the observation of organizational culture (LeCompte & Goetz, 1982). These methods enable researchers to understand the particular context within which the participants act and the influence that this context has on their actions (Maxwell, 2004).

Organizational culture is defined as shared values, beliefs, and assumptions that guide the behavior of individuals and groups in organizations (Schein, 1987). Aspects of organizational culture that can be seen, felt, and heard by an uninitiated observer include facility architecture, furniture, dress, written documents, mission and vision statements, forms of address, decision-making styles, and communication among co-workers. Aspects of this ALF's culture that positively impact caregiver-resident communication include caregiver training, caregiver-resident socialization, activity programming, and facility layout. Future studies should investigate the influence of organizational culture on quality of care.

Continuum of research. As described above, the ALF in which the study was conducted

is part of a continuing care retirement community (e.g., apartment, ALF, NH). The majority of residents sampled lived in the ALF for 1 to 3 years (67%). This thesis provided a description of caregiver-resident interactions characteristic of the middle stage of the continuum of care.

Future longitudinal studies should be conducted to examine caregiver-resident interactions across the continuum of care. A longitudinal study will enable researchers to compare and contrast features of caregiver-resident interactions as residents transition from his/her apartment to the ALF and the ALF to the NH. This type of study may identify changes in stereotype activation and speech production across the continuum of care.

In addition, a longitudinal study may inform ALF policy regarding caregiver assignments. More specifically, should caregivers follow residents as they transition along the continuum of care or should caregivers be assigned to a particular stage (e.g., apartment, ALF, or NH)? Which caregiver assignment-individual or stage based- positively impacts quality of care? Does following a particular resident provide more insight into identifying and accommodating a resident's needs or does specializing in conditions characteristic of a particular stage? A longitudinal study will provide insight into the relationship between caregiver assignment and the ability to identify and accommodate residents' needs (e.g., knowing characteristics of the individual resident versus knowing characteristics associated with a particular stage).

Residents' perspective. This study examined caregivers' use of age-adapted speech by evaluating the stereotypes they associate with residents. Future studies should investigate residents' perceptions of caregivers, especially their communication skills. A one-with-many (i.e., many residents nested within one caregiver), reciprocal design (i.e., caregivers and residents are measured) (Kenny et al., 2006) would provide insight into residents' perceptions of caregiver communication skills during routine daily encounters. This type of study would assess whether:

1) caregiver's perceptions of their communication skills is congruent with their residents' perception; and 2) residents of a specific caregiver agree with each other about their caregiver's communication skills. Caregiver-resident communication is essential to meeting ALFs goal of promoting autonomy, dignity, and personal choice (NCAL, 2001).

Conclusion

This thesis examined what predicts formal caregiver's use of normal adult or age-adapted speech with residents in an ALF. Using ASI (Hummert, 1994b), CPM (Ryan et al., 1986), CAT (Giles et al., 1987) and the SRM (Kashy & Kenny, 2000; Kenny, 1994; Kenny & LaVoie, 1984; Kenny et al., 2006) as theoretical and methodological guides, respectively, this study offers implications on the activation of age-related stereotypes and the production of age-adapted speech.

Specifically, this research indicates that caregiver age and residents' cues predispose caregivers to activate some, but not all age-related stereotypes. Younger caregivers associated residents more strongly with the positive dimension of the wisdom stereotype. As for cue-driven stereotype activation, residents with more aged physiognomic cues were associated with weaker ratings of independence and hearing proficiency, and to stronger ratings of wisdom. More infirm physique characteristics were related to weaker ratings of independence, wisdom, healthiness, and hearing proficiency. A poorly groomed, unkempt, unfashionable appearance was related to weaker ratings of healthiness. In regards to language production, only the hearing proficiency stereotype was associated with caregivers' use of age-adapted speech. Moreover, partner effect (residents with age-related cues) explained the most variance in caregiver-resident interactions.

The ability to improve caregiver-resident communication is important in light of the projected increase in the number of older adults that will require formal care (Health, United

States, 2007; Older Americans, 2008) and the rapidly growing ALF market (Aud & Rantz, 2005; Mollica & Johnson-Lemarche, 2005). As this research study reveals, communication scholars have the ability to help ALFs in achieving their stated goal of enabling residents to maintain independence by promoting autonomy, dignity, and personal choice (NCAL, 2001).

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Appendix A

Resident Profiles

Violet. Violet is 82 years old. She has been in the ALF wing for two years. She transitioned from her apartment when she began to need assistance with meal preparation and medication management. She is able to move around with use of a walker. Violet is a widow. She has a daughter and son who visit her weekly. She is very involved in the facility's activities and organizations. For example, she is a member of the residence council, knitting group, as well as regularly attends happy hour and coffee klatch. She has several friends including sampled resident, Eleanor.

Eleanor. Eleanor is 85 years old. She has been in the ALF wing for three years. She occasionally needs assistance with ADLs including dressing and bathing. She also requires assistance with medication management. Eleanor is able to move around with use of a walker. She is a widow and has three daughters. One daughter lives in Central Pennsylvania and visits weekly. Her other two daughters visit monthly. Eleanor is involved in the Wii Bowling league and knitting group, as well as regularly attends happy hour. Eleanor is social with several residents. She is close friends with sampled resident Violet.

Dorothy. Dorothy is 81 years old. She has been in the ALF wing for one year. Her and her husband moved to the ALF wing when they needed assistance with meal preparation and medication management. They have a daughter and son that visit monthly. Dorothy has a confident gait and is able to move around without use of a mobility device. She participates in various facility activities. For example, she is a residence council member, as well regularly attends happy hour and coffee klatch.

Lorraine. Lorraine is 89 years old. She has been in the ALF wing for 5 years. She occasionally needs assistance with ADLs including dressing and bathing. She often wears loose

fitting clothing. Lorraine is dependent on her walker to move from place to place. She is a widow and has one daughter who visits monthly. She mainly participates in the knitting group and happy hour.

Marie. Marie is 86 years old. She has been in the ALF wing for two years. Her and her husband moved to the ALF wing when Marie began to need more assistance getting around. They have one son that visits monthly. Marie is dependent on her walker to move from place to place. She occasionally needs assistance with ADLs including dressing and bathing. Despite needing assistance dressing, she always has stylish outfits and accessories. She is an active member of residence council and regularly attends happy hour and coffee klatch.

Mildred. Mildred is 80 years old. She has been in the ALF wing for less than one year. At the beginning of the study, she had recently transitioned from her apartment. She started to need assistance with medication management. Mildred has a confident gait and is able to move around without use of a mobility device. She is a widow and has two daughters who visit bimonthly. Mildred is a new member of ALF wing activities such as residence council and happy hour.

Appendix B

Letter to Executive Director of Assisted Living Facility

January 11, 2010

500 East Marylyn Avenue
State College, PA 16801

Dear Sir or Madam:

As a health communication masters student, I am interested in finding ways to improve the quality of life for aging adults. With an in interest in communication and aging, I have become aware of age-adapted speech. Caregivers frequently use this style of speech with older adults and don't realize its potential negative impact. My thesis study will examine communication within assisted living facilities in an attempt to improve interpersonal interactions between residents and caregivers.

I am seeking an assisted living facility to participate in my project. I will observe and record caregivers for short periods while they interact with residents.

In order to observe caregiver-resident interactions, I will need administrative approval and signed consents for participation from caregivers and residents (or guardians).

I will contact you by phone in the next week and hope to have the opportunity to discuss my project with you further. Thank you for your consideration.

Sincerely,

Danielle Catona
Health Communication Masters Candidate
234 Sparks Building
The Department of Communication Arts and Sciences
The Pennsylvania State University
University Park, PA 16802

Caregiver Consent Form

Informed Consent Form for Social Science Research

The Pennsylvania State University

Title of Project: *Age-adapted Speech in an Assisted Living Facility***Principal Investigator:** *Danielle Catona, 316 Sparks Building, University Park, PA 16802
(814) 863-0127; dxc336@psu.edu***Advisor:** *Dr. Rachel Smith, 318 Sparks Building, University Park, PA 16802
(814) 863-0030; ras57@psu.edu*

1. **Purpose of the Study:** We appreciate your cooperation and willingness to be observed. Also, thank you for taking a moment to complete our survey. We are trying to learn more about caregiver-resident communication in an assisted living facility. Your candid thoughts and opinions are deeply appreciated as we begin our project.
2. **Procedures to be followed:** Caregiver-resident interactions will be observed. Caregivers in this study will answer a series of questions about beliefs about assisted living facilities in a survey. Within the forty-eight hours, caregivers will answer a series of questions about beliefs about residents.
3. **Discomforts and Risks:** There are no risks in participating in this research beyond those experienced in everyday life. Some of the questions are personal and might cause discomfort.
4. **Benefits:** You might learn more about yourself by participating in this study. You might have a better understanding of how you view assisted living facilities and residents. This research should help health communicators to better understand caregiver-resident interactions in assisted living facilities.
5. **Duration/Time:** Each survey will take about ten to fifteen minutes to answer questions. All data will only be available to the investigators and will be stored in a locked office up to 5 years.
6. **Statement of Confidentiality:** Your participation in this research is confidential. The data will be stored and secured at 316 Sparks in a locked and password protected file. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.
7. **Right to Ask Questions:** Please contact Danielle Catona at (814) 863-0127 and/or Dr. Rachel Smith at (814) 863-0030 with questions or concerns about this research.
8. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

You must be 18 years of age or older to consent to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this consent form for your records.

Participant Signature

Date

Person Obtaining Consent

Date

Resident Informed Consent

Informed Consent Form for Social Science Research

The Pennsylvania State University

Title of Project: *Age-adapted Speech in an Assisted Living Facility*

Principal Investigator: *Danielle Catona, 316 Sparks Building, University Park, PA 16802
(814) 863-0127; dxc336@psu.edu*

Advisor: *Dr. Rachel Smith, 318 Sparks Building, University Park, PA 16802
(814) 863-0030; ras57@psu.edu*

1. **Purpose of the Study:** We appreciate your cooperation and willingness to be observed. We are trying to learn more about caregiver-resident communication in an assisted living facility. Your candid thoughts and opinions are deeply appreciated as we begin our project.
2. **Procedures to be followed:** Caregiver-resident interactions will be observed.
3. **Discomforts and Risks:** There are no risks in participating in this research beyond those experienced in everyday life. Some of the observations are personal and might cause discomfort.
4. **Benefits:** You might learn more about yourself by participating in this study. You might have a better understanding of how you view assisted living facilities and residents. This research should help health communicators to better understand caregiver-resident interactions in assisted living facilities.
5. **Duration/Time:** Each observation will take about two to five minutes. All data will only be available to the investigators and will be stored in a locked office up to 5 years.
6. **Statement of Confidentiality:** Your participation in this research is confidential. The data will be stored and secured at 316 Sparks in a locked and password protected file. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.
7. **Right to Ask Questions:** Please contact Danielle Catona at (814) 863-0127 and/or Dr. Rachel Smith at (814) 863-0030 with questions or concerns about this research.
8. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

You must be 18 years of age or older to consent to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this consent form for your records.

Participant Signature

Date

Signature and Relationship of person giving consent
(If not resident)

Date

Person Obtaining Consent

Date

Appendix C

Coding Sheet

Date: _____

Time: _____

Coder's initials: _____

Location for observation: _____

Activity during observation: _____

Who initiated the conversation? _____

Who was the target of the conversation? _____

How many other people were around (in the room) during this conversation: _____

Conversation Cues: Please indicate the degree to which the actor exhibits these features of age-adapted speech. Please provide specific examples of these features.

Simple vocabulary						Complex vocabulary
Simple grammar						Complex grammar
Terms of Endearment						Formal name
Restricted topic selection						Varied topic selection
Exaggerated intonation						Varied intonation
Indirect eye gaze						Direct eye gaze
> 2 feet						2-4 feet
Exaggerated expressions						Animated expressions
Exaggerated gesturing						Appropriate gesturing
Excessive touching						Social-polite touch

Notes:

Target Cues: Please indicate the degree to which the target exhibits these cues.

Smooth skin, colored hair, and firm eyes						Wrinkling skin, grey hair, and eye droop
Small, slit eyes; long, wide nose; small forehead; large chin						Large, round eyes; short, narrow nose; large forehead; small chin
Upright posture; confident gait						Poor posture; use of a mobility device
Lack of hearing aid						Use of hearing aid
Matching outfit; Brushed hair; Brushed teeth; Clean shaven; Clean face; Clean hands						Mixed-match outfit; Unbrushed hair; Unbrushed teeth; Dirty face; Dirty hands

Notes:

Ask the caregiver...

How long was your shift? (Hours)

How people were you in charge of?

Reminder

Remind them that they need to complete a survey on this person/these people within the next 48 hours and give to you.

Appendix D

Participant Survey Part I

In this section, please think about **assisted living facilities**. Please mark how much you agree/disagree with the following statements.

Assisted living facilities are places that...

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
Are personalized					
Promote freedom of action					
Allow individuals to go in and out as they please					
Promote social interaction					
Encourage individuals to participate in activities					
Facilitate comfortable conversation					
Are reflective of personal histories					
Are voluntary					
Promote free choice					
Promote time spent as worthwhile					
Promote feelings of control					
Are reflective of residents' character					

Second, please let us know a little bit more about yourself.

I am... Male Female

I identify with the ethnic/racial group... _____

I have completed (years) of formal education... _____ years.

I am (fill in) years of age _____ years.

I have worked in this facility for (fill in) years _____ years.

Participant Survey Part II

We would like you to think about different residents here at Foxdale Village. We will ask you to think about them one at a time, and to answer a series of questions about them. Please think about (INSERT INDIVIDUAL'S NAME) for this set of questions.

How much do you agree that this person is:

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
Able to eat without assistance					
Able to dress without assistance					
Able to move from place to place without assistance					
Able to bathe without assistance					
Able to use the toilet without assistance					
Sociable					
In contact with relatives					
In contact with friends					
Reclusive					
Isolated					
Quiet					
Process complex language					
Speak at a normal rate					
Remember important information					
Advice giver					
Storyteller					
Opinion leader					
Naïve					
Senseless					
Foolish					

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
Active					
Agile					
Alert					
Infirm					
Feeble					
Frail					
Hear without a hearing aid					
Hear without repetition of speech					
Hear without increased volume					
Hard of hearing					

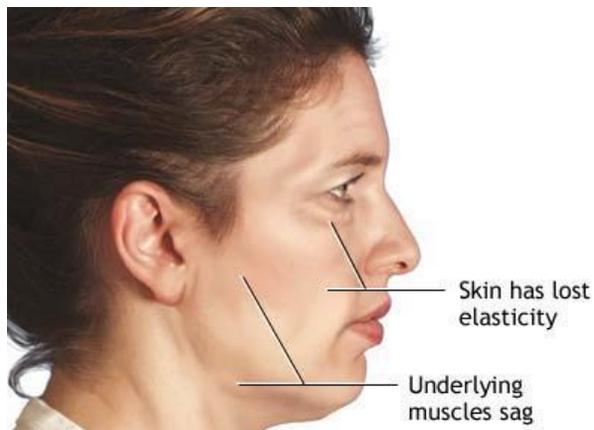
Please share your thoughts about your relationship with (INSERT INDIVIDUAL'S NAME).

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
I get along well with this person.					
I like spending time with this person.					
I like to keep this person company.					
I feel close to this person.					
I feel attached to this person.					
I am devoted to this person.					

Thank you for your participation!

Appendix E

Resident Physiognomic Cues



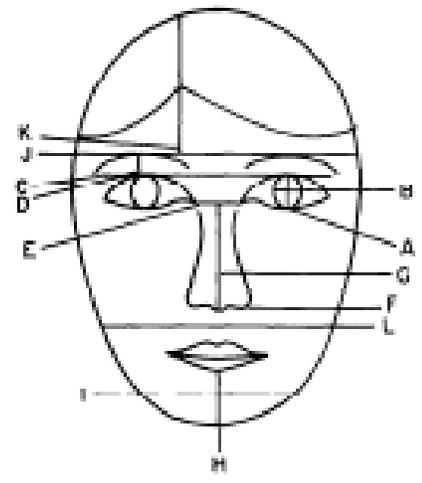
(Hummert, 1994a)





(Berry & McArthur, 1985)

Facial characteristics include: A) eye size, B) eye shape, C) eyebrow height, D) distance between the eyes, E) nose width, F) nose length, G) chin width, H) chin height, I) forehead height, J) forehead width, and K) cheek width.



Resident Physique Cues

Mobility Devices

Wheelchair

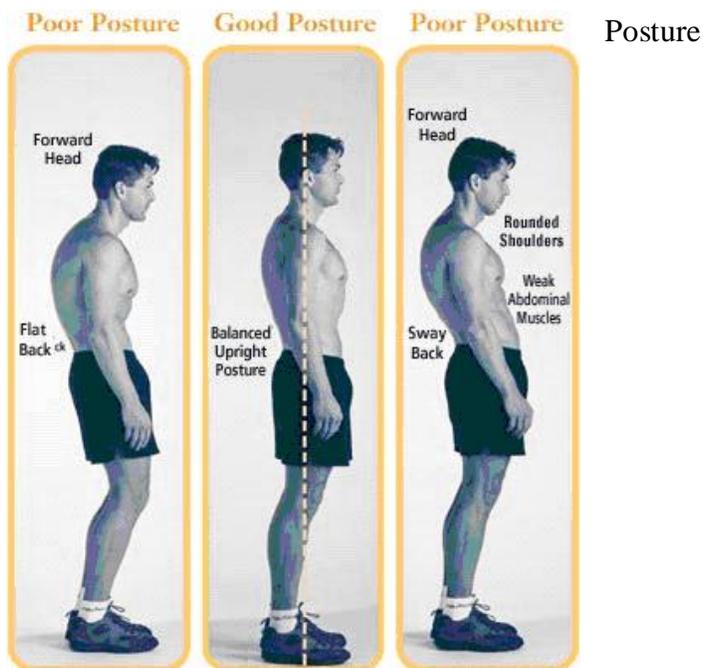


Walker



Cane





Resident Physical Appearance Cues

Hearing Aids



Appendix F

Conversation Cue Descriptions

Verbal

Vocabulary:

- Simple vocabulary- use of short words rather than longer equivalents.
 - Saying dog instead of Golden Retriever
 - Saying big instead of enormous.
- Childish terms
 - Using words like doggie instead of dog
 - Using words like choo-choo instead of train
- Pronoun modifications
 - “We need to get ready for bed.”
 - “It’s time for *our* medicine.”

Grammar:

- Simple sentences- use of short sentences without multiple clauses.
 - “Here’s your food. You can eat it. It is good.”
- Use of repetition- saying things over and over again.
 - “It’s 5 o’clock. It’s dinnertime. You need to get ready for dinner.”
- Tag questions- grammatical structures in which a declarative statement or an imperative is turned into a question by adding an interrogative fragment (the "tag").
 - “It is good juice, *isn’t it?*”
- Imperatives- express direct commands or requests.
 - “Go to the table. Sit here.”

Forms of Address:

- Terms of endearment:
 - “Have you had breakfast yet *dear?*”
- Childlike terms
 - “That’s a *good girl.*”

Topic Management:

- Limited topic selection
 - “Did you enjoy breakfast today?”
 - “You have to go to physical therapy this afternoon.”
- Dismissive of resident-generated topics
 - Resident: “My daughter is coming to visit today. She’s bringing my grandkids too.”
 - Caregiver: “It’s time to take your medicine.”
- Exaggerated praise for minor accomplishments
 - “Great job! You buttoned your blouse all by yourself.”

Nonverbal

Voice

- High and variable pitch- using a slightly squeaky voice style, and exaggerating the pitch variation in speech (a “sing-song” type speech style).
- Increased volume and reduced rate
 - Talking LOUDER and s-l-o-w-e-r

Gaze

- Low eye contact
- Staring
- Roll eyes
- Wink

Proxemics

- Stand too close
- Stand over a person seated or in bed
- Stand too far off

Facial expression

- Frown
- Exaggerated smile
- Raised eyebrows

Gestures

- Shake head
- Shrug shoulders
- Hand on hips
- Cross arms
- Abrupt movements

Touch

- Pat on head
- Pat on hand, arm, shoulder

Appendix G

Target Cue Training Materials



Appendix H

Conversation Cue Training Materials

(Ryan, Bourhis, & Knop, 1991)

Caregiver = CG Resident = R

Normal Adult Speech

CG: Did you have a nice day, today?

R: Well, it was all right I tried to watch some television in the lounge.

CG: Oh, I'm sure you saw some of your favorite morning programs. It's time for you to take your pills.

R: I suppose you would prefer me to take them while you're here, right?

CG: Yes, I must stay until you've taken your pills. Here's your glass of water, but take your time.

R: I like to drink a lot of water with my pills.

CG: That is a good habit that will make sure your pills are all the way down.

R: There... I've swallowed them. Thank you.

CG: You're welcome.

Age-adapted Speech

CG: Did you have a nice day, today?

R: Well, it was all right I tried to watch some television in the lounge.

CG: Poor dear! You probably slept there all morning. I'm here to give you your pills.

R: I suppose you would prefer me to take them all while you're here, right?

CG: Of course I do! Now, just stay there while I get some more water for you. Be a good girl and take them right now.

R: I like to drink a lot of water with my pills.

CG: That's fine; just get those pills all the way down.

R: There... I've swallowed them. Thank you.

CG: Good girl.