

ISSA Proceedings 2002 - Argumentative Traits In Older Adults: An Exploratory Study

Literature on Older Adults and Argumentative Traits



1. Communication and the Life-span Perspective

Scholars are increasingly interested in the communication characteristics of older adults. As Nussbaum, Hummert, Williams, and Harwood (1996) explained, "Perhaps the best reflection of this growth may be seen in the recent special issues of journals dedicated solely to communication and aging, such as have appeared in *Communication Research, Language and Communication, Ageing and Society, Journal of Ageing Studies, International Journal of Aging and Human Development, and... Health Communication*" (2-3). Furthermore, older adults' communication patterns have been studied in several important domains including cognition, language, and interpersonal/social relationships.

Simple demographic data suggest that this interest is certainly warranted given the increasing average age of the populace. According to the U.S. Department of Health and Human Services (2001), 12.4% of the current population is 65 years of age or older. The number of older Americans is expected to double to about 70 million by the year 2030. By sheer number, the older adult population is formidable and deserves study.

Nonetheless, researchers have noted the lack of a unifying perspective in which to study communication in older adults. "Communication scholars, on the other hand, have typically not accounted for life-span developmental changes in their various 'mainstream' theories of the communicative process" (Nussbaum, et al 1996: 2). Since communication patterns may change through life (Coupland & Nussbaum 1993; Nussbaum 1989), there is a definite need to identify and understand the various communication characteristics as people grow older.

Although the life-span perspective envelops several assumptions, two deserve

emphasis for this review (Baltes, 1987). First, all periods of the life-span are important for comprehending behavior patterns. No one period in a person's life is more important than another. Over reliance on data or theories from one period of life at the expense of another undermines a life-span perspective. Second, both change and stability can be observed as people age. "Our task is to document all such changes and aim for understandings that transcend age boundaries to achieve theories of life-span cognitive development" (Nussbaum, et al 1996: 38). Developing theories about human behavior can be problematic when there is a general tendency to conduct research using primarily college students. Even when different age groups are included in research (either as an actual age variable or as a correlate to age), researchers infrequently discuss age differences or conduct longitudinal studies to investigate how a given behavior may change over time.

When this perspective is applied to communication, research suggests that lifelong communication patterns may indeed be on an equal footing with genetics in predicting longevity (Friedman, Tucker, Schwartz, Tomlinson-Keasey, Martin, Wingard, & Criqui 1995). Increasing communication scholarship from the life-span perspective will enrich our knowledge base. As Nussbaum and colleagues (1996) concluded, "Communication scholars are in a rather unique position to join with other scholars to provide a much richer explanation of the aging process" (39).

2. Argumentativeness/Verbal Aggressiveness

Many studies have looked at the personality variables of argumentativeness and verbal aggressiveness. Argumentativeness is one's tendency to attack the position of others, while verbal aggression is one's tendency to attack the self-concept of others (Infante & Rancer 1982). Much of this research has centered on argumentativeness theory, which seeks to explain which personality and environmental variables are likely to influence argumentative or verbally aggressive messages.

While early research noted a negative correlation between an individual's levels of argumentativeness and verbal aggressiveness (i.e., Infante & Wigley 1986), most research now shows either no correlation or a weak positive correlation between these variables. As Infante and Rancer (1996) explained, "Because argumentativeness and verbal aggressiveness are situated in different, independent dimensions of personality (extroversion and neuroticism, respectively), it is expected that the two traits are not related. Thus, high,

moderate, and low argumentatives are equally likely to be high verbal aggressives” (323).

However, in a comprehensive meta-analysis involving 12 studies and 3,397 subjects, Hamilton and Mineo (2002) reported a slight positive correlation of 0.16. They concluded that “[t]he meta-analyses reported here do not support the original optimism regarding the projected social effects of decreasing verbal aggressiveness by increasing argumentativeness. The results indicated that the effect of argumentativeness on verbal aggression is positive and moderately small” (309).

Regardless of the specific relationship between argumentativeness and verbal aggressiveness, there are a variety of interesting associations with these two variables. A full review of these relationships is beyond the scope of this study (for an excellent analysis, see Infante & Rancer 1996), but the following characteristics are worth note. High argumentativeness is associated with higher perceived levels of credibility (Onyekwere, Rubin, & Infante 1991), marital satisfaction (Sabourin, Infante, & Rudd 1993), employee satisfaction (Infante & Gordon 1989), and communication competence (Richmond, McCroskey, and McCroskey 1989). Verbal aggression is associated with lower perceived credibility levels (Infante, Hartley, Martin, Higgins, Bruning, & Hur 1992), higher dislike (Infante & Gordon 1991), and lower employee satisfaction (Infante & Gordon 1989). These relationships underscore the need to understand both verbal aggressiveness and argumentativeness across the life-span, not just younger and middle-aged adult populations.

Applying the lifespan perspective to the study of argumentativeness is both unique and difficult. In previous research, age is generally found not to be associated with the trait of argumentativeness. However, older adults are often not included in these studies, nor is age examined as a factor per se, but several studies may suggest age differences.

Studies have investigated communication strategies of children, although relatively few of these looked at argumentativeness. However, we know that as children mature, they learn to adjust communication strategies to persuasive situations (Delia, Kline, & Burleson 1979). Beatty, Zelle, Dobos, and Rudd (1994) concluded that a father’s level of verbal aggressiveness influences his son’s level of verbal aggressiveness; thus, social learning may be important to this process. Rancer, Avtgis, Kosberg, and Whitecap (2000) studied the effect of

argumentativeness training on students in the seventh and eighth grade. They compared measurements of argumentativeness and verbal aggressiveness immediately after the training and then seven to twelve months later. Rancer and colleagues used modified versions of the argumentativeness and verbal aggressiveness scales that had originally been devised by Martin and Anderson (1997) to specifically research adolescent populations. They found that while there was no significant change over the time period in argumentativeness scores, there was a significant increase in verbal aggressiveness at the second time measurement. While the focus of this study was improving argumentativeness via training, the age of the participants (primarily 13 year-olds) may prove relevant to a life-span perspective.

Both the Beatty et al. (1994) and the Rancer et al. (2000) studies complicate the issue of making generalizations about life-span development because age as a variable has generally not been investigated in this domain. However, as noted above, the available research suggests that levels of argumentativeness and verbal aggression may not be constant across situations, and possibly more importantly, may not be constant across the lifespan. Costa and McCrae (1999) have indicated that the "Big Five" personality factors (openness, agreeableness, conscientiousness, extraversion, and neuroticism) tend to remain stable across the adult years but others note that interindividual differences in the direction and rate of personality change can be large (Jones & Meredith, 1996). Given that few studies have investigated argumentativeness and verbal aggressiveness over the life-span, our aim in this study was to explore these characteristics in a sample of younger and older adults.

Numerous studies have analyzed college-age samples for argumentativeness and verbal aggressiveness. In general, age has not been isolated as a variable in these studies. However, Martin and Anderson (1997) looked at differences between college-age adults and their parents for the traits of argumentativeness and verbal aggressiveness. This study was a test of social cognitive theory since it postulated that individuals learn by observing others in social settings. The mean age for the college students was roughly 20.5 years. For the mothers, the mean age was just under 49 while the mean age for fathers was just over 51 years. They found that although there was no significant relationship between the fathers' levels of argumentativeness and verbal aggressiveness and their children's respective levels (with the exception of an $r=.23$ for verbal aggressiveness between fathers and sons), there was a significant relationship between the

mothers' levels of argumentativeness and verbal aggressiveness and their children's levels. This relationship was true for sons, explaining 31% of the variance in the sons' aggressive communication traits, and daughters, explaining 21% of the total variance in the daughters' aggressive communication traits.

The Martin and Anderson (1997) study is important for several reasons. First, it investigated generational relationships. The mean age of the mothers and fathers in this study was the oldest mean age reported in a study involving the argumentativeness and verbal aggressiveness scales to date. Second, it shows that while social cognitive theory is effective at explaining some relationships, there is much more to uncover. Looking at these relationships with a life-span perspective could prove illuminating. Third, this study suggests that these relationships may exist within family units. Though these are all important conclusions, questions still exist as to the effect of age on one's level of argumentativeness and verbal aggressiveness.

When age is approached as a variable in predicting conversational and social skills, research does not find major differences between younger and older adults (Segrin, 1994). Of course, argumentativeness was not one of the "conversational skills" used in Segrin's study. Understanding possible age differences in a wider variety of "social or conversational skill" variables may give us a different understanding of how skills may develop or change over time.

3. Emotionality in Arguing

Previous research suggests that argumentatively aggressive people tend to display their emotions in a variety of ways, including raising their voices and showing indifference (Hample, Dallinger, & Nelson 1995). That people display emotion in arguments is a *prima facie* reality. Infante and Rancer (1996) also suggested that verbal aggression is actually a catalyst to physical violence. While emotions are easily readable for some people (i.e., two people staring angrily at one another as fists begin to curl), many people are not as easy to read emotionally. This could be true of older adults, who may be more reticent to display emotions or may experience a given emotion in ways manifestly different from younger adults and children (Diehl, Coyle, & Labouvie-Vief 1996).

Two important variables for our current understanding of emotion are emotional experience and emotional expression. "Emotional experience refers to the intrapersonal, internal reaction one has to an emotion-eliciting stimulus. As such, it can encompass affect, emotions, and mood" (Guerrero, Anderson, & Trost 1998: 9). While individuals do not always choose to express whatever emotion they may

be experiencing, they typically do. Emotional expression can include what individuals express privately, spontaneous emotional expressions, and strategic communication (9).

Similarly, a line of research in the aging literature has investigated emotion regulation and several general conclusions can be made. It appears that older adults do more emotion-focused coping, which is directed toward managing or regulating the emotional response to a stressful situation to reduce its physical or psychological impact (Diehl, et al 1996, Novacek, Pimley, & Lazarus 1987; Prohaska, Leventhal, Leventhal, & Keller 1987). Thus, as suggested by Papalia, Olds, and Feldman (2001), older adults may have a more flexible repertoire of coping strategies including emotion-focused coping and problem-focused coping, and use these strategies more appropriately. In addition, older adults tend to rate themselves as happier than younger adults and seem to experience negative emotions less often than younger adults (Papalia, Olds, & Feldman 2001).

4. Hypothesis/Research Questions

Research Question 1: What is the relationship between age (age group) and argumentativeness/verbal aggressiveness?

Research Question 2: Is the correlation between argumentativeness and verbal aggressiveness moderated by age?

Hypothesis: Older adults will be more emotionally regulative than younger adults.

Method

1. Participants

The younger adult group included 65 college students ($M=23.6$ years, $SD=7.1$; 43.1% males) and the older adult group was comprised of 26 community-dwelling older adults ($M=69.6$ years, $SD=8.2$; 48% males). Class ranks for the younger adult group were 26.2% freshmen, 18.5 % sophomores, 20% juniors, and 35.4% seniors.

2. Materials

Participants completed a total of four questionnaires: the Verbal Aggressiveness Scale (Infante & Wigley 1986), the Argumentativeness Scale (Infante & Rancer 1982), the Berkeley Expressivity Questionnaire (Gross & John 1997), and the Emotion Regulation Questionnaire (Gross & John in press). Participants also completed demographic items (age, gender, class rank, major, and minor). In addition, self-reported verbosity and off-target verbosity was assessed.

The Verbal Aggressiveness scale was designed to measure an individual's

tendency to attack the self-concept of another individual. Higher scores indicate greater verbal aggressiveness (Infante & Wigley 1986). The reliability of this scale for this study was $\alpha = 0.85$. The Argumentativeness Scale measures an individual's willingness to attack another's views and defend one's own. Higher scores indicate greater argumentativeness (Infante & Rancer 1982). The alpha for this scale was 0.60. The Berkeley Expressivity Questionnaire includes three subscales of emotional expressivity in addition to an overall index of emotional expressivity: negative expressivity, positive expressivity, and impulse strength. Higher scores indicate higher levels for each dimension as well as the overall index (Gross & John 1997). The alpha for the overall scale was 0.84. The Emotion Regulation Questionnaire was designed to assess two strategies of emotion regulation: emotional suppression and emotional reappraisal. Emotional suppression as a strategy refers to an individual suppressing the emotional experience so that others would not know if he or she was feeling anything. Emotional reappraisal involves cognitively changing how one thinks about an emotional experience in such a way so that he or she would not feel anything. Higher scores indicate higher levels of emotional suppression or emotional reappraisal (Gross & John in press). The alphas for the reappraisal and suppression subscales were 0.74 and 0.69, respectively.

3. Procedure

Participants first completed an informed consent form, followed by the Verbal Aggressiveness Scale, the Berkeley Expressivity Questionnaire, the Argumentativeness Scale, the Emotion Regulation Questionnaire, four verbosity items, and lastly, demographic information.

4. Results

Results are first presented for the age difference questions and are followed by the correlational analyses. There was a significant difference between younger and older adults for verbal aggressiveness, $t(83) = 2.94, p = .004$, with younger adults ($M = 46.2, SD = 10.3$) showing higher levels of verbal aggressiveness compared to older adults ($M = 39.0, SD = 8.7$). There was also a significant difference between groups in argumentativeness, $t(87) = 2.05, p = .043$, with the younger adult group ($M = 61.6, SD = 12.9$) exhibiting higher levels of argumentativeness compared to the older adult group ($M = 55.5, SD = 11.0$). Interestingly, there were no significant age group differences in emotional expressivity (or the subscales), $t(89) = 0.30, p = .769$, between younger ($M = 4.58,$

$SD=0.98$) and older adults ($M=4.52$, $SD=0.85$). There were also no significant age group differences in the emotional regulation strategy of reappraisal, $t(87)=0.32$, $p=.754$, or the strategy of suppression, $t(89)=-1.49$, $p=.141$, between younger ($Ms=29.3$, 14.4 , $SDs=5.9$, 4.8 , respectively) and older adult groups ($Ms=28.8$, 16.0 , $SDs=5.9$, 3.6 , respectively).

Correlations across age are presented in Table 1 (gender was coded as male = 1 and female = 2). Correlation effect sizes are interpreted using Cohen's (1988) rubric where a correlation of .10 is considered to be a small effect, $r=.30$ a medium effect, and $r=.50$ a large effect.

As expected, the relationship between argumentativeness and verbal aggressiveness was small to moderate and positive, $r=0.258$, $p<.05$. However, the correlations within age groups differ. The correlation between these two variables was 0.259 ($p=.042$) for the younger adult group and -0.023 ($p=.917$) for the older adult group. The older adult group correlation is in marked contrast to Hamilton and Mineo's (2002) correlation of 0.16 . The lack of a relationship between argumentativeness and verbal aggressiveness for the older adults suggests that this relationship is not linear across the lifespan.

Another surprising group difference was for the emotion regulation reappraisal strategy and verbal aggressiveness variables. The overall correlation was -0.244 ($p<.05$). But within the younger adult group, the correlation was -0.426 ($p=.001$) whereas the correlation was 0.241 ($p=.269$) for the older adult group. Apparently, greater verbal aggressiveness in the younger adults was associated with less use of reappraisal as an emotion regulation strategy and the opposite was true for the older adults.

The relationship between emotional expressivity and suppression as an emotional regulation strategy also appears to differ between age groups. The overall correlation for these two variables was -0.461 ($p<.01$) suggesting that individuals who were emotionally expressive were less likely to use suppression as an emotional regulation strategy. The within age-group correlation for younger adults followed the same pattern ($r=-0.553$, $p=.000$). In contrast, the size of relationship was much smaller for the older adults ($r=-0.113$, $p=0.583$).

Discussion

Our research question investigated whether a potential relationship exists between age and verbal aggressiveness or argumentativeness. The t-tests revealed significant differences between older and younger adults in both

argumentativeness and verbal aggressiveness. The correlations between age and argumentativeness ($r=-.246$) and between age and verbal aggressiveness ($r=-.372$) were also significant. This finding suggests that older individuals may become significantly less argumentative and even less verbally aggressive with age. This underscores a key tenet of the life-span perspective: communication characteristics change as we grow older. As such, it is important to take into consideration older populations as we seek to develop communication theories. While the reasons for this decline in argumentativeness and verbal aggressiveness are open for debate, scholars should not ignore older adults as argumentative subjects. Not only will research illuminate how communication characteristics alter over our lifetime, it will emphasize that no one period in a person's life is more important than another. At the risk of stating the obvious, communication occurs throughout an individual's life. Greater understanding of how we communicate and, more specifically, argue in our older years is needed.

The often-discussed correlation between verbal aggressiveness and argumentativeness is also worth noting. Clearly, age differences affect this relationship. While the positive correlation was significant for the younger adults, which conforms with Hamilton and Mineo's (2002) meta-analysis, the correlation was not significant for the older adults. In fact, the relationship was both very small and negative for this sample. Once again, this only underscores how communication characteristics change as one ages.

There were no significant group differences in any of the emotion scales between younger and older adults; thus, we cannot conclude that younger and older adults regulate and express their emotions in different ways. While the focus of these measurements is limited, our hypothesis suggested that older adults would be more regulative of their emotions in general.

However, when examining the relationship between reappraisal as an emotion regulation strategy and verbal aggressiveness, it is clear that younger and older adults differed. Verbally aggressive younger adults did not seem to use reappraisal as an emotion-regulating strategy ($r=-0.426$) compared to the older adults ($r=0.241$). Similarly, the relationship between emotional expressivity and suppression as an emotion regulation strategy also differed. Emotionally expressive younger adults were less likely to use suppression as an emotional regulation strategy ($r=-0.553$), but this effect was much smaller for older adults ($r=-0.113$). These findings support the conclusions of Papalia, Olds, and Feldman (2001), suggesting that older adults may have a more flexible repertoire of coping

strategies including emotion-focused coping, and use these strategies more appropriately.

We wish to clarify certain limitations of this study. First, this research is exploratory in nature. As such, its goal was to identify any relationships between age and argument behaviors. Second, the sample size was limited. Future studies will need larger samples to clarify relationships and potentially develop more robust associations. Third, we did not measure education level in our older adult sample. Level of education is frequently associated with argumentativeness. Future studies will need to control for education levels. Finally, we relied on self-report instruments. While these instruments are both reliable and valid, they may have certain biases that could be controlled by different measures or direct observation.

Nonetheless, we have raised questions that have not been researched to date. Our study suggests that as communication and psychology researchers study behavioral patterns in older adults, argumentative traits must and should be explored. Of particular interest is the drop in verbal aggressiveness in our sample. When one considers some of the negative stereotypes of older adults (i.e., the shrew/curmudgeon stereotype, where the elderly are assumed to be complaining, bitter, and ill-tempered: Hummert, Gartska, Shaner, & Strahm 1994), these results suggest that people's stereotypes of older adults may, at least in some circumstances, be misperceptions.

We have only scratched the surface of looking at argumentativeness and verbal aggressiveness from a life-span perspective. While these variables are well researched for adolescents, young adults, and middle-aged adults, we hope to encourage research on the older adult population. Not only does age affect someone's level of argumentativeness and verbal aggressiveness, age appears to affect the relationship between argumentativeness and verbal aggressiveness.

REFERENCES

- Baltes, P.B. (1987). Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology*, 23, 611-626.
- Beatty, M.J., Zelle, J.R., Dobos, J.A., & J.E. Rudd (1994). Fathers' trait verbal aggressiveness and argumentativeness as predictors of adult sons' perception of sarcasm, criticism, and verbal aggressiveness. *Communication Quarterly*, 42, 407-415.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.).

Hillsdale, NJ: Erlbaum.

Costa, P.T., Jr., & P.R. McCrae (1999). NEO personality inventory. In: A.E. Kazdira (Ed.), *Encyclopedia of psychology*. Washington, DC: American Psychological Association.

Coupland, N. & J.F. Nussbaum (Eds.). (1993). *Discourse and lifespan identity*. Newbury Park, CA: Sage.

Delia, J.G., Kline, S.L., & B.R. Burleson (1979). *The development of persuasive communication strategies in kindergartners through twelfth-graders*. *Communication Monographs*, 46, 241-256.

Diehl, M., Coyle, N., & G. Labouvie-Vief (1996). *Age and sex differences in strategies of coping and defense across the life span*. *Psychology and Aging*, 11, 127-139.

Folkman, S., Pimley, S., Novacek, J., & R.S. Lazarus (1987). Age differences in stress and coping processes. *Psychology and Aging*, 2, 171-184.

Friedman, H.S., Tucker, J.S., Schwartz, J.E., Tomlinson-Keasey, C., Martin, L.R., Wingard, D.L. & M.H. Criqui (1995). Psychosocial and behavioral predictors of longevity. *American Psychologist*, 50, 69-78.

Gross, J. J., & O.P. John (in press). Wise emotion regulation. In: L. Feldman Barret & P. Salovey (Eds.), *The wisdom in feeling: Psychological processes in emotional intelligence*. New York: Guilford.

Gross, J. J., & O.P. John (1997). Revealing feelings: Facets of emotional expressivity in self-reports, peer ratings, and behavior. *Journal of Personality and Social Psychology*, 72, 435-448.

Guerrero, L.K., Anderson, P.A., & M.R. Trost (1998). Communication and emotion: Basic concepts and approaches. In: P.A. Anderson & L.K. Guerrero (Eds.), *Handbook of Communication and Emotion: Research, Theory, Applications, and Contexts*, (pp.3-27), San Diego: Academic Press.

Hamilton, M.A. & P.J. Mineo (2002). Argumentativeness and its effect on verbal aggressiveness: A meta-analytic review. In: M. Allen, R.W. Preiss, B.M. Gayle, & N.A. Burrell (Eds.), *Interpersonal Communication Research: Advances Through Meta-analysis*, (pp.281-314), Mahwah, NJ: Lawrence Earlbaum.

Hample, D., Dallinger, J.M., & G.K. Nelson (1995). Aggressive, argumentative, and maintenance arguing behaviors, and their relationship to taking conflict personally. In: BF.H. van Eemeren, R. Grootendorst, J.A. Blair, and C.A. Willard (Eds.), *Reconstruction and Application: Proceedings of the Third ISSA Conference on Argumentation* (University of Amsterdam, June 21-24, 1994), Volume III, (pp. 238-250), Amsterdam: International Centre for the Study of Argumentation, Sic

Sat.

Hummert, M.L., Gartska, T.A., Shaner, J.L., & S. Strahm (1994). Stereotypes of the elderly held by young, middle-aged, and elderly adults. *Journal of Gerontology: Psychological Sciences*, 49, 240-249.

Infante, D.A. & W.I. Gorden (1989). Argumentativeness and affirming communicator style as predictors of satisfaction/dissatisfaction with subordinates. *Communication Quarterly*, 37, 81-90.

Infante, D.A. & W.I. Gorden (1991). How employees see the boss: Test of an argumentative and affirming model of superiors' communicative behavior. *Western Journal of Speech Communication*, 55, 294-304.

Infante, D.A., Hartley, K.C., Martin, M.M., Higgins, M.A., Bruning, S.D. & G. Hur (1992). Initiating and reciprocating verbal aggression: Effects on credibility and credited valid arguments. *Communication Studies*, 43, 182-190.

Infante, D.A. & A.S. Rancer (1982). A conceptualization and measure of argumentativeness. *Journal of Personality Assessment*, 46, 72-80.

Infante, D.A. & A.S. Rancer (1996). Argumentativeness and verbal aggressiveness: A review of recent theory and research. In: B. Burleson (Ed.), *Communication Yearbook 19*, (pp. 319-351), Thousand Oaks: Sage.

Infante, D.A. & C.J. Wigley (1986). Verbal aggressiveness: An interpersonal model and measure. *Communication Monographs*, 53, 61-69.

Jones, C.J., & W. Meredith (1996). Patterns of personality change across the life span. *Psychology and Aging*, 11, 57-65.

Martin, M.M. & C.M. Anderson (1997). Aggressive communication traits: How similar are young adults and their parents in argumentativeness, assertiveness, and verbal aggressiveness? *Western Journal of Communication*, 61, 299-314.

Nussbaum, J.F. (1989). *Lifespan communication: Normative processes*. Hillsdale, NJ: Lawrence Earlbaum.

Nussbaum, J.F., Hummert, M.L., Williams, A. & J. Harwood (1996). Communication and older adults. In: B. Burleson (Ed.), *Communication Yearbook 19*, (pp. 1-47), Thousand Oaks: Sage.

Onyekwere, E.O., R.B. Rubin, & D.A. Infante (1991). Interpersonal perception and communication satisfaction as a function of argumentativeness and ego-involvement. *Communication Quarterly*, 39, 35-47.

Papalia, D.E., Olds, S.W., & R.D. Feldman (2001). *Human development* (8th ed.). New York: McGraw-Hill.

Prohaska, T.R., Leventhal, E.A., Leventhal, H., & M.L. Keller (1987). Impact of symptoms and aging attribution on emotions and coping. *Health Psychology*, 6,

495-514.

Rancer, A.S., Avtgis, A.S., Kosberg, R.L., & V.G. Whitecap (2000). A longitudinal assessment of trait argumentativeness and verbal aggressiveness between seventh and eighth grades. *Communication Education*, 49, 114-119.

Richmond, V.P., McCroskey, J.C., & L.L. McCroskey (1989). An investigation of self-perceived communication competence and personality orientations. *Communication Research Reports*, 6, 28-36.

Roberto, A.J. & M. Finucane (1997). The assessment of argumentativeness and verbal aggressiveness in adolescent populations. *Communication Quarterly*, 45, 21-36.

Sabourin, T.C., Infante, D.A., & J.E. Rudd (1993). Verbal aggression in marriages: A comparison of violent, distressed but nonviolent, and nondistressed couples. *Human Communication Research*, 20, 245-267.

Segrin, C. (1994). Social skills and psychosocial problems among the elderly. *Research on Aging*, 16, 301-321.

U.S. Department of Health and Human Services. (2001). *A profile of older Americans: 2001*. Washington DC: Author