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# How Similar are Wise Men and Women? A Comparison Across Two Age Cohorts

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Orwoll and Achenbaum (1993) suggest that the path to wisdom might be considerably different for men and women, although a wise person might have integrated the feminine and masculine aspects of wisdom. Using samples of 464 undergraduate college students and 178 older adults (age 52+), univariate and multivariate analyses of variance revealed that wisdom (measured by cognitive, reflective, and affective characteristics) was unrelated to gender. Women, however, tended to score higher on the affective dimension of wisdom than men. By contrast, men tended to outperform women on the cognitive wisdom dimension only among the older cohort. The results might reflect gender-specific socialization practices and changes in those practices for the younger cohort. As predicted, no significant differences between men and women were found in the three dimensions of wisdom among the top 25% of wisdom scorers, suggesting that relatively wise persons have integrated the cognitive and affective dimensions of wisdom.

The purpose of this study was to investigate gender similarities and differences in wisdom in two age cohorts, undergraduate college students, and older adults above the age of 50 years. According to Orwoll and Achenbaum (1993), the path to wisdom might vary considerably for men and women due to gender-specific socialization, obstacles, and opportunities throughout the life course. Achenbaum and Orwoll (1991) define *wisdom* as intrapersonal, interpersonal, and transpersonal experiences in the dimensions of cognition (thought), affect (feeling), and conation (behavior). The cognitive dimension comprises self-knowledge, understanding, and the recognition of the limits of knowledge and understanding. The affective dimension consists of self-development, empathy, and self-transcendence,

and the conative dimension represents integrity, maturity in relationships, and philosophical/spiritual commitments.

Given this definition, males might have an advantage in the intrapersonal sphere and cognitive wisdom dimension, whereas females might excel in the interpersonal and affective aspects of wisdom (Orwoll & Achenbaum, 1993). Boys are often socialized to explore the world and to become independent and self-reliant (Blazina, 2001). Hence, "masculine" thinking could be described as self-contained individualism that is characterized by separation, detachment, mastery, and achievement (Sampson, 1977). Girls, by contrast, are encouraged to develop interpersonal skills, such as empathy and the ability to care for others (Surrey, 1993). Therefore, men might find it easier than women to perceive reality in an objective, rational, and detached way, whereas women might be more empathetic, caring, and mature in relationships than men.

However, Orwoll and Achenbaum (1993) argue that a wise person has integrated the feminine and masculine aspects of the self. Wise people are masculine in the sense that they can approach the world in a logical, rational, and objective manner and that they have the desire to know the truth and to understand life, yet they are also feminine due to their empathy, sympathy, compassion, and concern for the well-being of others. Thus, wise individuals are best described as androgynous because they combine feminine and masculine personality characteristics (Heath, 1991; Jung, 1971; Labouvie-Vief, 1990; Maslow, 1970; Pascual-Leone, 1990). As Orwoll and Achenbaum (1993, p. 283) stated, "Along the path to wisdom, it is likely that wise people have drawn on specific strengths and overcome liabilities associated with their respective genders."

Apart from the theoretical deliberations by Orwoll and Achenbaum (1993) on the relation between wisdom and gender, very few studies have explicitly investigated this association. Wisdom nomination studies generally find that college students, adults of all ages, and top journalists tend to nominate older men rather than women or younger people as exemplars of wise individuals (Ardelt, 2008a; Baltes, Staudinger, Maercker, & Smith, 1995; Denney, Dew, & Kroupa, 1995; Maercker, Böhmig-Krumhaar, & Staudinger, 1998). Yet, when asked to nominate a person who understands interpersonal relationships and other people and, therefore, might be considered interpersonally wise, young adults and older men tended to nominate women, whereas older women tended to nominate men (Denney et al., 1995).

In most cultures, the prototype of the wise (older) man is more prevalent than that of the wise woman (Orwoll & Perlmutter, 1990). Hence, nomination studies probably measure the cultural sex-role stereotypes and implicit gender conceptions of wisdom rather than the actual wisdom of men and women (Denney et al., 1995; Orwoll & Achenbaum, 1993). In fact, with very few exceptions, empirical research generally does not find any gender differences in wisdom despite large variations in its operationalization and assessment. For example, ratings of individuals' wisdom-related knowledge in the areas of rich factual knowledge and

rich procedural knowledge about the fundamental pragmatics of life, life-span contextualism (knowledge about the contexts of life and how these change over time), value relativism (knowledge about the relativism of values and life goals), and the recognition and management of uncertainty did not reveal any gender differences in a sample of highly educated young, middle-aged, and older German adults (Smith & Baltes, 1990) nor in a sample of German adolescents and young, middle-aged, and older adults from diverse educational backgrounds (Kunzmann & Baltes, 2003). In a longitudinal study of primarily White Americans, gender was equally unrelated to Q-sort ratings of the participants' wisdom in early, late middle, and late adulthood that characterized a wise person as straightforward, clear thinking, introspective, insightful, philosophically concerned, and unconventional in thinking (Wink & Dillon, 2003). Neither analytic wisdom (defined as knowledge database and abstract reasoning) nor synthetic wisdom (defined as reflective understanding, emotional empathy, and emotional regulation) was significantly related to gender among middle-aged and older American and Japanese adults (Takahashi & Overton, 2002). In a sample of European American and Vietnamese American adults between ages 35 and 105 years, gender was not associated with ratings of transcendent wisdom either, defined as a combination of self-knowledge, detachment, integration, and self-transcendence (Le, 2008). Likewise, the self-administered Adult Self-Transcendence Inventory (ASTI), which also measures self-transcendent wisdom, was unrelated to gender in a study of American adults ranging in age from 18 to 73 years (Levenson, Jennings, Aldwin, & Shiraishi, 2005) and in a sample of European American and Vietnamese American undergraduate college students (Le, 2008). Webster's (2007) revised 40-item Self-Assessed Wisdom Scale (SAWS), which assesses the noncognitive aspects of wisdom consisting of critical life experiences, emotional regulation, reflectiveness/remembrance, openness to experience, and humor, was equally unrelated to gender in a sample of Canadian adults ranging in age from 17 to 92 years.

Yet some studies do report gender differences in wisdom, particularly on subscales that assess the affective (feminine) component of wisdom. In a sample of Canadian adults between age 22 and 78 years, women tended to score higher than men on the original noncognitive 30-item Self-Assessed Wisdom Scale (Webster, 2003). Similarly, female students tended to score significantly higher on the self-administered Adolescent Wisdom Scale than male students in a study of American high school seniors due to higher scores on the Harmony/Warmth and Spirituality subscales. By contrast, no significant gender difference was found on the Intelligence subscale of the Adolescent Wisdom Scale (Perry et al., 2002).

This study explored gender differences in the cognitive and affective dimensions of wisdom across two cohorts, using samples of 464 college students and 178 older adults (age 52 and older). As originally proposed by Clayton and Birren (1980) based on a multidimensional scaling analysis of wisdom attributes rated by young, middle-aged, and older adults, *wisdom* was defined and operationalized as a

combination of cognitive, reflective, and affective personality characteristics. The cognitive dimension of wisdom encompasses a desire to know the truth and a deep and thorough understanding of life, which entails knowledge and acceptance of the positive and negative aspects of human nature, of the inherent limits of knowledge, and of life's unpredictability and uncertainties (Ardelt, 2000; Blanchard-Fields & Norris, 1995; Brugman, 2000; Chandler & Holliday, 1990; Kekes, 1983; Osbeck & Robinson, 2005; Sternberg, 1990). The reflective dimension of wisdom denotes self-awareness and the ability to look at phenomena and events from different perspectives. Unbiased and mindful reflection that includes self-reflection and self-examination, in turn, is likely to result in an increased understanding of one's own and other people's motives and behavior, a reduction in self-centeredness (Csikszentmihalyi & Rathunde, 1990; Kekes, 1995; Taranto, 1989), and, consequently, greater sympathetic and compassionate love for others, which describes the affective dimension of wisdom (Achenbaum & Orwoll, 1991; Clayton & Birren, 1980; Csikszentmihalyi & Rathunde, 1990; Holliday & Chandler, 1986; Kramer, 1990; Pascual-Leone, 1990). At the same time, the practice of mindful (self-)reflection will also enable individuals to perceive reality more clearly through the transcendence of subjectivity and projections, which are the major obstacles in realizing a deeper and more objective truth (see Ardel, 2004, and Table 1 for a detailed definition of the three dimensions of wisdom and their operationalization).

This study tested the following hypotheses based on the theoretical deliberations by Orwoll and Achenbaum (1993). Wisdom, assessed as a combination of cognitive, reflective, and affective personality characteristics, was assumed to be unrelated to gender (Hypothesis 1). Men, however, were expected to score higher on the cognitive component of wisdom than women (Hypothesis 2). Women, by contrast, were expected to score higher on the affective component of wisdom than men (Hypothesis 3). Gender was not predicted to be related to the reflective component of wisdom (Hypothesis 4). Among the top 25% of wisdom scorers, no significant gender differences in the three dimensions of wisdom were expected because it was assumed that relatively wise individuals have integrated the masculine and feminine aspects of wisdom (Hypothesis 5). No gender-specific cohort effects were predicted. Gender differences in the cognitive and affective dimensions of wisdom were assumed to be equally present in the two cohorts of college students and older adults.

## METHOD

### Procedure and Samples

#### *Student Sample*

At the beginning of the fall semester of 2005 and 2006 and the spring semester of 2006 and 2007, students in 20 undergraduate upper-division classes in sociology,

TABLE 1  
Definition and Operationalization of Wisdom as a Three-Dimensional  
Personality Characteristic

<i>Dimension</i>	<i>Definition</i>	<i>Operationalization</i>
Cognitive	An understanding of life and a desire to know the truth, that is, to comprehend the significance and deeper meaning of phenomena and events, particularly with regard to intrapersonal and interpersonal matters. Includes knowledge and acceptance of the positive and negative aspects of human nature, of the inherent limits of knowledge, and of life's unpredictability and uncertainties.	Items or ratings assess <ul style="list-style-type: none"> <li>• the ability and willingness to understand a situation or phenomenon thoroughly,</li> <li>• knowledge of the positive and negative aspects of human nature,</li> <li>• acknowledgement of ambiguity and uncertainty in life,</li> <li>• the ability to make important decisions despite life's unpredictability and uncertainties.</li> </ul>
Reflective	A perception of phenomena and events from multiple perspectives. Requires self-examination, self-awareness, and self-insight.	Items or ratings assess <ul style="list-style-type: none"> <li>• the ability and willingness to look at phenomena and events from different perspectives,</li> <li>• the absence of subjectivity and projections (i.e., the tendency to blame other people or circumstances for one's own situation or feelings).</li> </ul>
Affective	Sympathetic and compassionate love for others.	Items or ratings assess <ul style="list-style-type: none"> <li>• the presence of positive, caring, and nurturant emotions and behavior toward others,</li> <li>• the absence of indifferent or negative emotions and behavior toward others.</li> </ul>

*Note.* Adapted from Ardel (2004).

religion, mental health counseling, health science, psychology, and nursing at a public university in North-Central Florida were invited to volunteer for a survey on attitudes, behavior, and general well-being. Students received extra class credit in exchange for their survey participation, which was determined by completed informed consent forms. A list of participating students was given to the class instructors at the end of the semester after the students' regular grades had been computed. None of the instructors was present during data collection. To facilitate data entry, students recorded their responses anonymously on answer sheets that were later scanned.

Overall, 477 students took part in the survey, but only 464 students indicated their gender. Of those 464 students, 73% were women, 69% were White, 13% were African American, 10% were Hispanic, 8% were Asian, and 4% were

married. Approximately half (47%) of the students were seniors and 32% were juniors. The mean and median age category was 21 years. Because the answer sheets that students used provided only five answer choices, the exact ages of the 27% of students who were in the age category of "22 and above" is not known, although the majority of those students was probably in their early 20s. The younger students did not differ significantly from the older students with regard to gender ( $t = 1.66, p = .10$ ), minority status ( $t = -.47, p = .64$ ), or the cognitive ( $t = -.57, p = .57$ ), reflective ( $t = -.37, p = .71$ ), and affective ( $t = -1.42, p = .16$ ) dimensions of wisdom.

### *Older Adult Sample*

The older adult sample was recruited from 17 close-knit social groups of mostly older adults from North-Central Florida that included church groups and civic or community organization groups. Between December 1997 and June 1998, older adults who had volunteered during regular group meetings to participate in a "Personality and Aging Well" study were visited by research team members at their home to sign the informed consent form and receive instructions on how to complete the self-administered survey questionnaire. Ten participants preferred to conduct the interview with a research team member at the time of the visit, whereas the remaining respondents returned the completed questionnaire by mail in preaddressed, stamped envelopes.

Of the 180 older adults who returned the survey, 178 completed the wisdom scale and indicated their gender. Of those older adults, 73% were women, 73% were White, 26% were African American, and 1% was Hispanic. More than half (61%) of the sample was married, 30% were widowed, 78% were retired, and 44% had a bachelor's or graduate degree. The older respondents ranged in age from 52 to 87 years with a mean age of 71 years ( $SD = 8.04$ ) and a median age of 72 years.

The percentage of women was identical in the student sample and the older adult sample. The percentage of Whites and African Americans was higher in the older adult sample than in the student sample because the older adult study targeted only those racial groups. Yet the older adult sample did not differ significantly from the student sample when comparing the percentage of Whites and minority participants ( $t = -1.08, p = .28$ ).

### **Wisdom Measure**

Wisdom was measured by the cognitive, reflective, and affective dimensions of the Three-Dimensional Wisdom Scale (3D-WS), whose development and empirical assessment is described in detail in Ardel (2003). The cognitive dimension is assessed by 14 items, measuring the absence of cognitive wisdom characteristics. The items assess an inability or unwillingness to understand a situation or

phenomenon thoroughly (e.g., “Ignorance is bliss”), a tendency to see the world as either black or white (e.g., “People are either good or bad”), an unawareness of ambiguity and uncertainty in life (e.g., “There is only one right way to do anything”), and an inability to make important decision despite life’s unpredictability and uncertainties (“I am hesitant about making important decisions after thinking about them”). It should be noted that several items in the original item pool measured the presence of cognitive wisdom qualities. Yet those items were either associated with a social desirability bias and/or only weakly or even negatively related to other items in this dimension. The 12 items of the reflective wisdom dimension measure the ability and willingness to look at phenomena and events from different perspectives (e.g., “I always try to look at all sides of a problem”) and the absence of subjectivity and projections (e.g., “Things often go wrong for me by no fault of my own” – reversed). The 13 items of the affective wisdom dimension assess the presence of positive, caring, and nurturant emotions and behavior (e.g., “Sometimes I feel a real compassion for everyone”) and the absence of indifferent or negative emotions and behavior toward others (e.g., “It’s not really my problem if others are in trouble and need help” – reversed).

Two 5-point scales were used to measure the items, which either ranged from 1 (*strongly agree*) to 5 (*strongly disagree*) or from 1 (*definitely true of myself*) to 5 (*not true of myself*). All items were scored so that higher values indicated the presence of cognitive, reflective, and affective wisdom characteristics before the average of the item scores was computed separately for each of the three wisdom dimensions. Cronbach’s alpha for the cognitive, reflective, and affective dimensions were .71, .75, and .66, respectively, for the student sample and .78, .75, and .74, respectively, for the older adult sample. The mean of the three wisdom dimensions (rather than the average of the 39 individual items) represents the overall wisdom score of a person. Cronbach’s alpha for the three dimensions of wisdom was .72 for the student sample and .66 for the older adult sample.

## Analysis

Data were analyzed using 2-way and 3-way univariate and multivariate 2 (students vs. elders)  $\times$  2 (men vs. women)  $\times$  2 (top 25% of wisdom scorers vs. bottom 75% of wisdom scorers) ANOVA. Several follow-up univariate MANOVA and *t*-test analyses were conducted. To determine the impact of the differential level of college education among the older adult sample, a chi-square analysis and univariate ANOVA and ANCOVA were performed.

Because the exact ages of the older students above the age of 21 was not known, all analyses were repeated comparing the older adult sample with the younger students under the age of 22. Unless results differed significantly, however, only results with the complete student sample are reported below.

## RESULTS

## Mean Differences in Wisdom by Gender and Age Group

A univariate ANOVA showed that the 173 study men ( $M = 3.60$ ,  $SD = .37$ ) and the 469 study women ( $M = 3.64$ ,  $SD = .38$ ) did not have significantly different average scores on the 3D-WS,  $F(1,638) = .13$ ,  $p = .72$ , partial  $\eta^2 = .000$ . This was equally true for the student sample ( $M_{\text{Men}} = 3.59$ ,  $SD = .37$ ;  $M_{\text{Women}} = 3.64$ ,  $SD = .37$ ) and the older adult sample ( $M_{\text{Men}} = 3.64$ ,  $SD = .39$ ;  $M_{\text{Women}} = 3.61$ ,  $SD = .40$ ) as the interaction effect between age group and gender was not significant,  $F(1,638) = 1.18$ ,  $p = .28$ , partial  $\eta^2 = .002$ . The main effect for age group was also insignificant ( $M_{\text{Students}} = 3.63$ ,  $SD = .37$ ;  $M_{\text{Elders}} = 3.62$ ,  $SD = .40$ ),  $F(1,638) = .08$ ,  $p = .78$ , partial  $\eta^2 = .000$ .

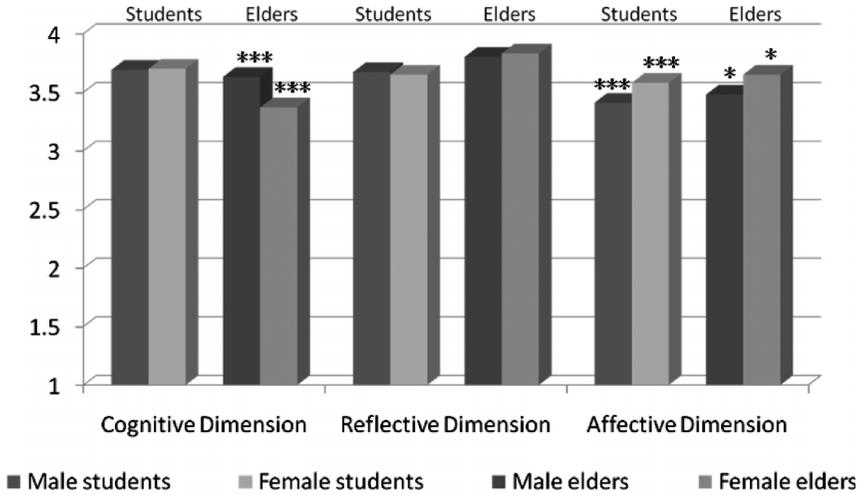
## Mean Differences in the Three Dimensions of Wisdom by Gender and Age Group

A two-way MANOVA was performed to examine whether the scores for the cognitive, reflective, and affective dimensions of wisdom differed for men and women among current college students and older adults. The main effect for gender was significant, Pillai's Trace = .054,  $F(3,636) = 12.14$ ,  $p < .001$ , as were the main effect for age group, Pillai's Trace = .074,  $F(3,636) = 16.97$ ,  $p < .001$ , and the two-way interaction effect between gender and age group, Pillai's Trace = .016,  $F(3,636) = 3.51$ ,  $p = .015$ .

Follow-up univariate ANOVAs showed that the interaction effect between gender and age group was significant only for the cognitive wisdom dimension,  $F(1,638) = 7.43$ ,  $p = .007$ , partial  $\eta^2 = .012$ . Among older adults, men had significantly higher average scores on the cognitive wisdom dimension ( $M = 3.63$ ,  $SD = .44$ ) than women,  $M = 3.37$ ,  $SD = .58$ ,  $t(176) = 2.76$ ,  $p = .006$ , as expected, but there was no significant difference between men ( $M = 3.69$ ,  $SD = .44$ ) and women ( $M = 3.70$ ,  $SD = .47$ ) on the cognitive wisdom dimension among college students,  $t(462) = -.20$ ,  $p = .84$  (see Fig. 1). College students also tended to have higher scores on the cognitive wisdom dimension ( $M = 3.70$ ,  $SD = .47$ ) than the older respondents ( $M = 3.44$ ,  $SD = .56$ ),  $F(1,638) = 16.72$ ,  $p < .001$ , partial  $\eta^2 = .026$ .

As predicted, men and women did not differ with regard to the reflective dimension of wisdom,  $F(1,638) = .01$ ,  $p = .91$ , partial  $\eta^2 = .000$ , although older respondents ( $M = 3.82$ ,  $SD = .49$ ) scored significantly higher on this dimension, on average, than college students ( $M = 3.65$ ,  $SD = .49$ ),  $F(1,638) = 10.90$ ,  $p = .001$ , partial  $\eta^2 = .017$ .

As hypothesized and depicted in Figure 1, women tended to score higher on the affective wisdom dimension ( $M = 3.60$ ,  $SD = .43$ ) than men ( $M = 3.43$ ,  $SD = .49$ ),  $F(1,638) = 14.45$ ,  $p < .001$ , partial  $\eta^2 = .022$ . This was true for college students,  $M_{\text{Women}} = 3.58$ ,  $SD = .42$ ;  $M_{\text{Men}} = 3.41$ ,  $SD = .46$ ,  $t(462) = -3.91$ ,



\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .10$

FIGURE 1 Mean differences in the three dimensions of wisdom by gender and age group.

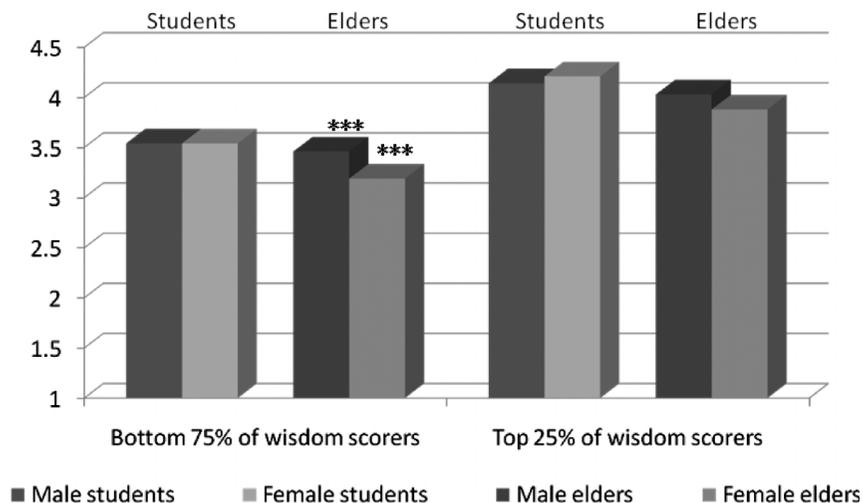
$p < .001$ , and also for the older adults in the sample,  $M_{\text{Women}} = 3.65$ ,  $SD = .47$ ,  $M_{\text{Men}} = 3.48$ ,  $SD = .56$ ,  $t(176) = -1.96$ ,  $p = .052$ . On average, college students and older adults did not receive significantly different scores on the affective component of wisdom,  $F(1,638) = 2.43$ ,  $p = .12$ , partial  $\eta^2 = .004$ . Yet, when the students older than age 21 were excluded from the analyses, older adults ( $M = 3.60$ ,  $SD = .50$ ) had significantly higher average scores on this wisdom dimension than younger college students ( $M = 3.52$ ,  $SD = .44$ ),  $F(1,513) = 3.71$ ,  $p = .055$ , partial  $\eta^2 = .007$ .

### Mean Differences in the Three Dimensions of Wisdom by Gender, Age, and Wisdom Group

A three-way MANOVA was performed to examine whether the scores for the cognitive, reflective, and affective dimensions of wisdom differed for men and women in the top 25% and bottom 75% of wisdom scorers among current college students and older adults to test if relatively wise individuals have integrated the masculine and feminine aspects of wisdom. Respondents in the top 25% of wisdom scorers received a combined wisdom score of 3.88 or higher on a scale ranging from 1 to 5. The three-way interaction effect between gender, age group, and wisdom group, Pillai's Trace = .005,  $F(3,632) = .98$ ,  $p = .40$ , and the two-way interaction effect between age group and wisdom group were not statistically significant, Pillai's Trace = .002,  $F(3,632) = .42$ ,  $p = .74$ . Yet the two-way

interaction effect between gender and wisdom group was significant, Pillai's Trace = .013,  $F(3,632) = 2.87$ ,  $p = .036$ , as was the two-way interaction effect between gender and age group at the trend level, Pillai's Trace = .011,  $F(3,632) = 2.40$ ,  $p = .067$ . All three main effects for gender, Pillai's Trace = .026,  $F(3,632) = 5.69$ ,  $p = .001$ , age group, Pillai's Trace = .064,  $F(3,632) = 14.29$ ,  $p < .001$ , and wisdom group, Pillai's Trace = .427,  $F(3,632) = 157.14$ ,  $p < .001$ , were statistically significant.

Follow-up univariate ANOVAs showed that the interaction effect between gender and wisdom group was not significant for the cognitive wisdom dimension,  $F(1,634) = 1.10$ ,  $p = .29$ , partial  $\eta^2 = .002$ . The significant interaction effect between gender and age group, however, was only significant for this wisdom dimension,  $F(1,634) = 7.12$ ,  $p = .008$ , partial  $\eta^2 = .011$  (see Fig. 2). Among the bottom 75% of wisdom scorers, no gender differences were found among college students on the cognitive wisdom dimension,  $M_{\text{Men}} = 3.54$ ,  $SD = .39$ ;  $M_{\text{Women}} = 3.54$ ,  $SD = .40$ ,  $t(347) = .16$ ,  $p = .87$ . Yet older men tended to have significantly higher scores on the cognitive wisdom dimension ( $M = 3.46$ ,  $SD = .39$ ) than older women,  $M = 3.19$ ,  $SD = .55$ ,  $t(128) = 2.64$ ,  $p = .009$ . Those significant differences disappeared among the top 25% of wisdom scorers as predicted. Among the top 25% of wisdom scorers, gender differences regarding the cognitive dimension of wisdom were neither significant for the college students,



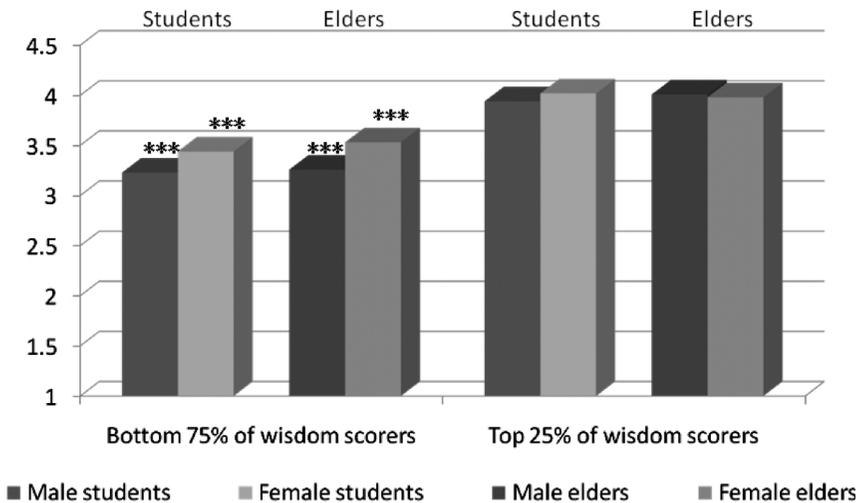
\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .10$

FIGURE 2 Mean differences in the cognitive dimension of wisdom by gender, age, and wisdom group.

$M_{Men} = 4.14, SD = .27, M_{Women} = 4.21, SD = .31, t(113) = -1.01, p = .32$ , nor the older adults in the sample,  $M_{Men} = 4.03, SD = .26, M_{Women} = 3.88, SD = .33, t(46) = 1.54, p = .13$ .

As expected, the interaction effect between gender and wisdom group was not significant for the reflective wisdom dimension,  $F(1,634) = .63, p = .43$ , partial  $\eta^2 = .001$ , and there were no gender differences among the bottom 75% of wisdom scorers for college students,  $t(347) = .74, p = .46$  and older adults,  $t(128) = -1.05, p = .30$ , or among the top 25% of wisdom scorers for college students,  $t(113) = -.34, p = .73$  and older adults,  $t(46) = 1.34, p = .19$ .

Univariate ANOVAs showed that the interaction effect between gender and wisdom group was only significant for the affective wisdom dimension,  $F(1,634) = 6.45, p = .011$ , partial  $\eta^2 = .010$  (see Fig. 3). Among the bottom 75% of wisdom scorers, women tended to score higher on the affective wisdom dimension than men. This was equally true for college students,  $M_{Men} = 3.23, SD = .35, M_{Women} = 3.44, SD = .35, t(347) = -4.93, p < .001$ , as for the older adults in the sample,  $M_{Men} = 3.26, SD = .45, M_{Women} = 3.53, SD = .46, t(128) = -2.85, p = .005$ . As hypothesized, no significant gender differences were found among the top 25% of wisdom scorers. Among the top 25% of wisdom scorers, gender differences regarding the affective dimension of wisdom were insignificant for college students,  $M_{Men} = 3.94, SD = .32, M_{Women} = 4.02$ ,



\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .10$

FIGURE 3 Mean differences in the affective dimension of wisdom by gender, age, and wisdom group.

$SD = .31$ ,  $t(113) = -1.24$ ,  $p = .22$ , and older adults,  $M_{Men} = 4.01$ ,  $SD = .42$ ,  $M_{Women} = 3.98$ ,  $SD = .29$ ,  $t(46) = .26$ ,  $p = .79$ .

### Mean Differences in the Cognitive Dimension of Wisdom Among Older Adults by Gender and College Education

A higher percentage of older men (53%) than older women (41%) had a college degree, which might account for their significantly higher average scores on the cognitive dimension of wisdom compared to older women. Yet this percentage difference in college education was not statistically significant,  $\chi^2(1) = 2.20$ ,  $p = .14$ . Although older adults with a college degree tended to have significantly higher scores on the cognitive wisdom dimension ( $M = 3.68$ ,  $SD = .48$ ) than those without a college degree,  $M = 3.27$ ,  $SD = .56$ ,  $t(173) = -5.14$ ,  $p < .001$ , there was no interaction effect between gender and college degree for the cognitive wisdom dimension,  $F(1,171) = .34$ ,  $p = .56$ , partial  $\eta^2 = .002$ . Within each educational level, older men tended to have higher scores on the cognitive wisdom dimension ( $M_{College\ degree} = 3.86$ ,  $SD = .34$ ,  $M_{No\ college\ degree} = 3.40$ ,  $SD = .41$ ) than older women ( $M_{College\ degree} = 3.59$ ,  $SD = .51$ ,  $M_{No\ college\ degree} = 3.23$ ,  $SD = .59$ ). A follow-up univariate ANCOVA showed that even after adjusting for the effect of a college degree, older men continued to have significantly higher average scores on the cognitive wisdom dimension ( $M_{Adjusted} = 3.61$ ) than older women ( $M_{Adjusted} = 3.39$ ),  $F(1,172) = 6.08$ ,  $p = .015$ , partial  $\eta^2 = .034$ .

## DISCUSSION

As predicted in Hypothesis 1, women tended to score as high on the 3D-WS as men, regardless of age. This suggests that, on average, men and women are equally wise if *wisdom* is defined and operationalized as a combination of cognitive, reflective, and affective personality qualities, although men might excel more in the cognitive wisdom domain (Hypothesis 2), whereas women might have an advantage in affective wisdom characteristics (Hypothesis 3). Hypothesis 2, however, was only partially supported. As expected, men tended to score higher on the cognitive component of wisdom, but only among the older adults in the sample. Yet, as stated in Hypothesis 3, women tended to score higher on the affective component of wisdom than men. Those results are similar to a study of high school seniors, which also found significantly higher scores for female students on the Harmony/Warmth subscale of the self-administered Adolescent Wisdom Scale (AWS) but no gender difference on the Intelligence subscale of the AWS (Perry et al., 2002).

Hypothesis 4 was also corroborated as there were no significant gender differences on the reflective dimension of wisdom. Finally, as predicted in Hypothesis

5, no significant differences between men and women were found among the top 25% of wisdom scorers in each of the three wisdom dimensions. The insignificant gender differences among the top 25% of wisdom scorers cannot be explained solely by the smaller sample size compared to the bottom 75% of wisdom scorers. As Figures 2 and 3 show, the gender differences among older adults in the cognitive wisdom dimension and among college students and older adults in the affective wisdom dimension were much smaller in the top wisdom group than in the lower wisdom group. Moreover, the gender difference for older adults in the affective wisdom dimension was actually reversed in the top wisdom group. The results support Orwoll and Achenbaum's (1993) assertion that relatively wise persons have integrated the feminine and masculine components of wisdom.

Gender differences among the bottom 75% of wisdom scorers, by contrast, might reflect gender-specific and cohort-specific socialization practices (Orwoll & Achenbaum, 1993). Older men tended to score higher on the cognitive wisdom dimension than older women, whereas male and female college students tended to score equally high on this dimension. Although a higher percentage of older men than older women had a college degree and a college education was positively related to the cognitive wisdom dimension, the gender difference in educational attainment was not statistically significant among the older adult sample. The interaction effect between gender and college degree was also insignificant, with older men surpassing older women on the cognitive wisdom dimension at each educational level. A more likely explanation for this gender difference might be gender-specific socialization practices at the time when the older adults were children and changes in those practices for the cohort of current college students.

Because "masculine" cognitive characteristics, such as intellectual independence, objectivity, and rationality are valued in our society (Sampson, 1977) and gender equality is encouraged in present-day society (Alleyne, 2004; Rogers, Hirata, Chandran, & Robinson, 1995), it is likely that parents now foster the development of those qualities in their sons and daughters alike. However, when the older adults were children, gender-specific socialization practices that promoted autonomy and independence for boys and relatedness and interdependence for girls were probably much more prevalent than they are today (Mead, 1944).

Notably, men in both age cohorts tended to score lower on the affective component of wisdom than women. The same significant gender difference in the affective dimension of wisdom and nonsignificant gender differences in the cognitive and reflective wisdom dimensions were also found in a sample of young university students in Slovakia (Benedikovičová & Ardelet, 2008). It might be that those "feminine" affective characteristics, such as compassionate love and care for others, are valued less in our male-dominated society than the "masculine" cognitive wisdom characteristics (Orwoll & Achenbaum, 1993). Hence, parents might foster

those characteristics less in their sons than in their daughters by encouraging gender-typed activities in their children (Lytton & Romney, 1991). For example, research on gender-specific socialization has shown that parents and nonparents alike consistently choose “masculine” toys (e.g., tools or truck) over relationship-oriented “feminine” toys (e.g., dolls and doll house) and “neutral” toys (e.g., puzzles and books) when playing with a boy but make no distinction between feminine and neutral toys when playing with a girl (Wood, Desmarais, & Gugula, 2002). Those gender differences in the affective component of wisdom are likely to persist as long as society devalues “feminine” personality qualities.

Interestingly, in a study of undergraduate American college students of European and Vietnamese heritage at a university in California, women tended to score slightly higher on the 3D-WS than men (Le, 2008). Unfortunately, this study did not look at gender differences in the three dimensions of wisdom, so it is not clear whether women excelled in all three dimensions of wisdom or only exceptionally well in the affective wisdom domain. In addition, Vietnamese Americans tended to score significantly lower on the 3D-WS than Whites. The study did not test for an interaction effect between gender and culture, yet it is possible that gender differences in wisdom operate differently in non-western cultures.

Although this was not the focus of this study, several cohort differences in the three dimensions of wisdom were found. Students tended to score higher on the cognitive wisdom dimension than the older adults in the sample and, conversely, older adults tended to have higher scores on the reflective wisdom dimension than college students and on the affective wisdom dimension if the older college students were excluded from the analysis. Given the fact that a college education was positively related to the cognitive wisdom dimension and all of the young adults in this study were students, whereas slightly less than half of the older adult sample had a college degree, it is likely that the students’ college education accounts for their higher scores on the cognitive wisdom dimension. In fact, the average scores on the cognitive wisdom dimension did not significantly differ for college students and the college-educated older adults in this sample (Ardelt, 2006). Older adults’ higher average scores on the reflective and affective wisdom dimensions compared to the scores of all college students and young college students, respectively, might be explained by older adults’ maturational changes across the life course and, due to their advanced age, more opportunities for older adults to reflect on and learn from past experiences and to become more other-centered in the process (Ardelt, 2000, 2008b; Blanchard-Fields & Norris, 1995; Sternberg, 2000, 2005).

Of course, the study is limited given that the nonrandom samples of college students and older adults were collected in a narrow geographical area and are not necessarily representative of college students and older adults in general. Moreover, the older adult sample was collected almost a decade earlier than the college student sample and was restricted to White and African American older

adults. It is possible that societal changes after the events of 9/11 in 2001 and the greater racial diversity in the college student sample might have affected the wisdom scores of the college students, although it is unclear whether those factors might have influenced the scores for male and female college students differently. Furthermore, the exact ages of the college students older than age 21 was not known due to the limited choices on the answer sheets. It could be that older returning students might bias the results for the college students, even though the bias would likely be in the direction of the older adult scores and, hence, should make it more difficult to find age group-related significant differences. Yet, with one exception, the analyses with the complete student sample did not produce statistically different results from the analyses with the younger student sample. After excluding the older students, older adults had significantly higher average scores on the affective component of wisdom than young college students. This means that older students had higher scores on the affective wisdom component than younger college students, although the difference between the two student groups was not statistically significant. All gender differences, however, remained the same whether or not the older students were included in the analyses. It is also reassuring that a sample of young college students under the age of 22 in Slovakia shows the same gender pattern in the three dimensions of wisdom as the college students in this study. Future studies will need to investigate if the same gender and cohort differences are present in representative random samples from different cultures.

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