

# An Exploratory Analysis of a Self-Assessed Wisdom Scale<sup>1</sup>

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Three studies investigated the psychometric properties of the newly developed self-assessed wisdom scale (SAWS). Study 1 investigated the reliability of a 30-item questionnaire assessing 5 interrelated dimensions of wisdom. Results indicated the scale had good reliability ( $\alpha = .78$ ) and adequate factor structure. Study 2 demonstrated clear differences in people's implicit theories of wisdom using the SAWS: persons instructed to complete the measure according to their implicit theories of wisdom scored significantly higher ( $t = 9.40, p = .000$ ) than persons completing the measure according to their implicit theories of foolishness. Study 3 demonstrated the construct validity of the SAWS by showing significant relationships between it and two independent measures thought to reflect aspects of wisdom, namely, generativity and ego integrity. Preliminary analyses of the SAWS suggests it has good initial reliability and validity. Suggestions for scale refinement and future research are examined.

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**KEY WORDS:** positive aging; implicit theories of wisdom; generativity; ego integrity; validity.

## INTRODUCTION

*"Wisdom is about as elusive as psychological constructs get"*

(Sternberg, 1990a, p. ix).

Is it a fool's errand to try to capture wisdom within the parameters of a paper-and-pencil questionnaire? Can such a rich, dynamic, and elusive concept be reduced to a total score from a self-assessed survey? Is it possible to identify dimensions of wisdom that are reliable and valid? Questions such as these frame the research reported here.

The past decade has witnessed a resurgence in interest in the ancient topic of wisdom, particularly by cognitive and developmental psychologists interested in positive aspects of aging (e.g., Ardelt, 1997; Baltes & Staudinger, 2000; Denney, Dew, & Kroupa, 1995; Simonton, 1990; Sternberg, 1998; Takahashi,

2000; Wink & Helson, 1997). The majority of research to date has been primarily conceptually and theoretically oriented, with less emphasis on empirical measurement. Research emphasizing the latter, primarily conducted by Baltes and colleagues (e.g., Baltes & Smith, 1990; Baltes & Staudinger, 1993; Staudinger & Baltes, 1996), has focused on wisdom-related performance in cognitive decision-making. In contrast, few attempts have been made to develop scales to measure dimensions of wise persons themselves rather than the products of their information-processing evaluations. The purpose of the present report, therefore, is to introduce a preliminary measure of wisdom and describe its initial psychometric properties.

## Wisdom as Multidimensional

Despite divergent perspectives, there is a general consensus that wisdom is a multidimensional construct (e.g., Ardelt, 1997; Baltes & Staudinger, 2000; Birren & Fisher, 1990; Clayton & Birren, 1980; Holliday & Chandler, 1986; Labouvie-Vief, 1990; Orwoll & Perlmutter, 1990; Sternberg, 1998; Taranto, 1989). Just what the specific dimensions are, however,

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is still open to conjecture and investigation. Nevertheless, there is further agreement that whatever the constituent components might be, they operate in a holistic manner. Each part is a necessary, but not sufficient, element in wisdom's realization. Possessing intellect but lacking prosocial values, for example, can only make one smart, but not wise; conversely, manifesting altruistic impulses but without the supporting intellectual properties may produce a well-intentioned, yet ineffectual intervener. A synthesis of at least these two skill sets would be required for wisdom to emerge. What are some of the possible candidates for wisdom dimensions? A review of the literature suggested the following five components discussed below.

### *Experience*

Wisdom cannot develop in a vacuum. Rather, it emerges during the exigencies of life, the rough and tumble of everyday existence. Successful negotiation of critical transitions, positive resolution of crucial problems, and adaptive coping with stressful environments serve as the crucible of wisdom. This may explain, in part, the association in people's minds with wisdom and age; the older one is the more experience they have acquired. It may also explain the relatively inconclusive and equivocal empirical findings regarding age and wisdom (e.g., Meacham, 1990; Staudinger, 1999). Consistent with Kramer (1990) then, I argue that it is not accumulated *general* experience per se that leads to wisdom, but in contrast, experiences that are difficult, morally challenging, and require (or perhaps enable) some degree of profundity. Wink and Helson (1997) have recently offered some empirical support for this contention when they found that women who experienced divorce scored higher in wisdom than women who had not gone through this difficult life event.

From this perspective, then, we can see how a 76-year-old who has led a very comfortable, sheltered, and privileged life has acquired more general experiences than a younger adult but may still develop less wisdom than a 23-year-old single parent struggling to survive in a less nurturing climate. After all, deciding which set of pearls to wear to the opera is not in the same realm as deciding whether it is okay for your 5-year-old daughter to spend the night with your abusive, ex-spouse. As Noam (1996) suggests, "... people who have experienced difficult life histories are the ones who are propelled to greater wisdom and deeper meaning" (p. 139).

### *Emotional Regulation*

For many researchers (e.g., Ardel, 1997; Clayton & Birren, 1980; Holliday & Chandler, 1986; Kramer, 1990; Orwoll & Perlmutter, 1990) affect sensitivity or emotional regulation are key elements of wisdom. Consistent with both earlier humanistic orientations (e.g., Rogers, 1961) and contemporary perspectives on emotional development in adulthood (e.g., Magai & McFadden, 1996) is the belief that emotional attunement and appropriate expression are key elements in fully functioning personhood and mental health.

Similar to related concepts such as emotional intelligence (Salovey & Mayer, 1990) and intrapersonal intelligence (Gardner, 1983), the emotional dimension of wisdom involves an exquisite sensitivity to the gross distinctions, subtle nuances, and complex blends of the full range of human affect. Recognizing, embracing, and employing emotions in a constructive way is a benchmark of wisdom. A person who can only distinguish between being "mad" and "damn mad" in response to a relationship dissolution would be considered less wise than an individual in a similar situation who can identify and discriminate among "mixed emotions" and use this knowledge to facilitate problem resolution.

### *Reminiscence and Reflectiveness*

Central to both ancient philosophical, and current psychological construals of wisdom, is some variant of the philosophers dictum to "know thyself" (e.g., Csikszentmihalyi & Rathunde, 1990; Robinson, 1990). Evaluative reflection on one's past and present life serves a host of valuable psychological functions, including identity formation and maintenance, self-understanding, problem-solving, and adaptive coping. Kramer (1990) identified life review as one of the functions of wisdom and Baltes and colleagues argue that wise persons should be "experts" in life review.

These perspectives imply an antecedent-consequence sequence, whereby the initial emergence of wisdom enables one to effectively function in the domain of life review. It is certainly possible, of course, that a proclivity to reminisce and review one's life is a precursor to, and necessary condition for, wisdom to develop (e.g., Randall & Kenyon, 2002). More likely, as several authors acknowledge, these two factors are mutually interdependent and develop in a dynamic, reciprocal fashion.

Life review (Butler, 1995) has been suggested as the mechanism that allows ego integrity (Erikson,

1963) to develop in later life, and several positive functions of reminiscence (e.g., Webster & McCall, 1999) have been identified which may contribute to wisdom.

In short, examining one's life creates opportunities to identify both personal strengths and weaknesses. Recognition of such allows us to augment the former and ameliorate the latter. It also allows us to explore the meaning of our lives to date, a philosophical task inherent in wisdom.

### *Openness*

Rigid and inflexible responses to life's demands mark an individual as unwise. Since most nontrivial problems are multiply determined, an openness to alternate views, information, and potential solution strategies optimizes the wise person's efforts to surmount obstacles efficiently. Recently, Staudinger, Lopez, and Baltes (1997) found that openness to experience was one of the most powerful predictors (i.e.,  $r = .42$ ) of wisdom-related performance. Other researchers (e.g., Arlin, 1990; Taranto, 1989; Wink & Helson, 1997) have also argued for the inclusion of openness as a critical dimension of wisdom. Exploring possibilities, entertaining discordant opinions, and investigating novel approaches to ongoing conundrums build a repertoire of skills from which the wise person can draw upon at some future date.

In personality research, openness to experience constitutes one of the "Big Five" (Digman, 1990) personality factors, and it has been found to be related to constructs thought to reflect aspects of wisdom such as ego level (e.g., McCrae & Costa, 1980). Openness is also considered to be a fundamental ingredient in positive psychological constructs such as psychological well-being (e.g., Ryff & Keyes, 1995), which one would predict to be higher in wise individuals.

### *Humor*

One facet of wisdom which has received only passing attention is humor. Although recognized by some authors (e.g., Taranto, 1989) as an important element of wisdom, systematic attempts to investigate this component are lacking. Tangential accounts of the positive benefits of humor, such as the work of Vaillant (1977) on mature defense mechanisms, suggest that the wise individual recognizes, enjoys, and uses humor in a variety of contexts and for myriad purposes. Erikson (cited in Friedman, 1999) said, "I can't imagine a wise old person who can't laugh. The world is full of ridiculous dichotomies" (p. 468).

Frecknall (1994) notes that humor "... is often the source of a closeness with people, and an enhancer/enricher of experience... It is a tool for strength. Humor takes the edge off of things, and offers a sense of perspective on life" (p. 17). Erikson (1963) defined humor as "... the ability at rare moments to play with and to reflect fearlessly on the strange customs and institutions by which man must find self-realization (p. 406).

Just as not all types of experience contribute to wisdom (see above), not all types of humor contribute to wisdom: sarcasm, teasing, and caustic humor may have their place, but they are not the province of wisdom. Rather, recognition of irony, stress reduction (for self and others), and prosocial bonding purposes are examples of types of humor which fall within the purview of wisdom.

### **Summary**

The preceding five dimensions serve as a nonexhaustive, yet relatively broad cluster, of interrelated wisdom components. In the current account, each is considered a necessary, but not sufficient, aspect of wisdom. For instance, experience is necessary, but without the reflective element the means of evaluating and learning from such experience is wasted. Humor in isolation may produce a class clown without the emotional attunement required to discern what effect one's humorous intent has on others. Openness to ideas, values, and behaviors is merely empty potential unless acted upon in the related four areas.

In summary, the current project conceptualizes wisdom as a multidimensional cohesion of five mutually interdependent factors. When these dimensions are holistically combined to a high degree in an individual, we recognize that person as wise. Aside from the recent work by Ardel (1997) and Wink and Helson (1997) who combined preexisting measures originally designed to assess constructs other than wisdom, there are few published attempts to construct a purpose-built questionnaire measure of wisdom. The following studies introduce such a measure and examine its initial reliability and validity findings.

## **STUDY 1**

### **Method**

#### *Participants*

Eighty-seven men and 179 women, ranging in age from 18 to 74 years ( $M$  age = 28.5;  $SD$  = 13.37),

**Table I.** Prototypical Characteristics and Sample Items for All 5 SAWS Dimensions

Dimension	Prototypical characteristics of high scorers
Experience	Rich and varied experiences in interpersonal contexts particularly those requiring resolution of difficult life choices; coping with important life transitions; exposure to life's "darker" side (e.g., dishonesty, hypocrisy). <i>Q1: I have experienced many painful events in my life (.691)</i> <i>Q16: I have experienced many moral dilemmas (.662)</i>
Emotions	Exposure to, and appropriate regulation of, the full spectrum of human emotions; an ability to distinguish among subtle, mixed emotions; an acceptance of, and openness to, both positive and negative affective states. <i>Q27: I am good at identifying subtle emotions within myself (.802)</i> <i>Q17: I am very good at reading my emotional states (.726)</i>
Reminiscence	Reflectiveness, particularly as it pertains to one's personal past; using memories to maintain identity, connect the past with the present, and gain perspective; using autobiographical memories as a coping strategy. <i>Q18: Reviewing my past helps gain perspective on current concerns (.757)</i> <i>Q28: Remembering my earlier days helps me gain insight into important life matters (.709)</i>
Openness	Openness to ideas, values, and experiences, particularly those which may be different from one's own; willingness to sample novelty; appreciation of multiple perspectives which may be controversial; tolerance of others. <i>Q30: I do not like being around other persons whose views are strongly different from mine (.553)*</i> <i>Q5: I like to read books which challenge me to think differently about issues (.541)</i>
Humor	Recognition of life's ironies and a well-developed sense of humor, especially of a self-effacing kind; ability and willingness to make others feel comfortable; use of humor as a mature coping strategy <i>Q9: There is nothing amusing about difficult situations (.489)*</i> <i>Q24: At this point in my life, I find it hard to laugh at my mistakes (.485)*</i>

Note. Italicized text are SAWS questions. Items which were reverse-scored are indicated by an\*. Values in parentheses are factor loadings.

participated in Study 1. Participants were primarily either Chinese Canadian (40.1%,  $n = 107$ ) or White Canadian (36.4%,  $n = 98$ ), followed in descending order by Other (13.8%), Japanese, East-Indian, and First Nations (all at 2.6%), and Black (1.9%) Canadians. For the entire sample, mean education level was 14.36 years ( $SD = 2.52$ ) and mean level of self-perceived health was 5.01 ( $SD = 1.19$ ). Younger participants were recruited from freshman and sophomore psychology classes at a demographically diverse Community College in Vancouver, Canada; older adults were recruited by freshman and sophomore psychology students who had not completed the scale themselves.

### Measures

The self-assessed wisdom scale (SAWS) is a 30-item questionnaire asking participants to indicate their level of agreement on a 6-point Likert-type scale (from 1 = *strongly disagree* to 6 = *strongly agree*) to a series of statements reflecting five conceptually different, yet empirically overlapping, dimensions of personal experience. Following a review of the literature (see Introduction) the following five dimensions were hypothesized to be relatively characteristic of a prototypically wise individual: (1) emotional regulation, (2) humor, (3) critical life experiences, (4) reflectiveness/remembrance, and (5) openness to experience.

Six statements intended to reflect each of the five dimensions were written for a total of 30 statements. Six of the statements were negatively worded and reverse-scored to reduce response set. Table I provides descriptions of the prototypical characteristics for each dimension as well as sample items from the SAWS and corresponding factor loadings.

### Results

Since wisdom is conceptualized in this study as a combination of the five dimensions, the total SAWS score is taken as the index of wisdom strength. The main analysis, therefore, focused on the reliability of the total scale score. Results indicated that the total scale reliability was acceptable ( $\alpha = .78$ ).

A secondary question concerned the factor structure of the SAWS. Since the total score is what is of primary importance, which factor an item loads on is of less, although still considerable, concern. The data, therefore, were submitted to a principal components analysis factoring procedure with number of factors set at five. Because it was expected that the five dimensions would be interrelated, Promax rotation was used as it allows factors to be correlated.

Overall, the factor loadings consistently reflect the five dimensions although the humor and openness dimensions have some overlap and weaker loadings. Several attempts using different iterations (e.g.,

eliminating questions with the lowest loadings) and exploring different rotation procedures (e.g., varimax, equimax, and promax) produced minimal variation in results with the negative exception of lowering the overall reliability of the scale. Therefore, despite some low factor loadings, it was decided, in light of the preliminary and exploratory nature of the study, to keep all items for the present time. As mentioned, retaining all items had the advantage of increasing the scale's reliability.

## Discussion

The purpose of Study 1 was to demonstrate the reliability of the SAWS. For the entire scale a reliability coefficient of .78 was obtained, indicating that the SAWS is a reliable instrument. Items meant to reflect a specific dimension generally loaded on the appropriate factor suggesting that they do indeed accurately represent the hypothesized concept. At least for initial exploratory purposes, then, the SAWS appears to be an internally consistent assessment device. With reliability demonstrated, subsequent attention is directed toward forms of validation, the focus of Study 2 and 3.

## STUDY 2

Study 2 draws upon persons' implicit theories of wisdom and its antithesis, foolishness to see whether the SAWS can differentiate responses corresponding to these polar opposites. As such, the purpose of Study 2 is to demonstrate divergent validity.

Previous research (e.g., Clayton & Birren, 1980; Holliday & Chandler, 1986; Orwoll & Perlmutter, 1990; Sternberg, 1985, 1990b) has shown that laypersons share a well-articulated and relatively differentiated concept of wisdom. If the SAWS is a valid measure of wisdom then mean scores of persons responding as though "wise" should be, at minimum, statistically significantly higher than mean scores of persons responding as though "foolish."

More stringently, the mean scores of the two groups should be separated by a substantial amount in absolute value, with little or no overlap between the two distributions of scores. The latter would indicate that few, if any, persons in the "foolish" category would score anywhere in the range of the "wise" distribution, and vice versa, illustrating a strong and clear separation in people's minds between wisdom and foolishness. Study 2 tested the above hypothesis

by having half the sample complete the SAWS according to their implicit theory of a wise person and half the sample completing the SAWS according to their implicit theory of a foolish person.

## Method

### *Participants*

Forty-five men and 44 women, ranging in age from 18 to 88 ( $M$  age = 39.22;  $SD$  = 17.67), participated in Study 2. Overall, the sample consisted of relatively healthy ( $M$  self-perceived health = 5.00;  $SD$  = 1.28) individuals with a mean education level of 14.73 years ( $SD$  = 2.48). Half the participants were Caucasian (50.6%), followed in descending order by Other (22.5%), Chinese (18.0%), Black and East Indian (3.4% each), and Japanese (2.2%) Canadian.

### *Procedure*

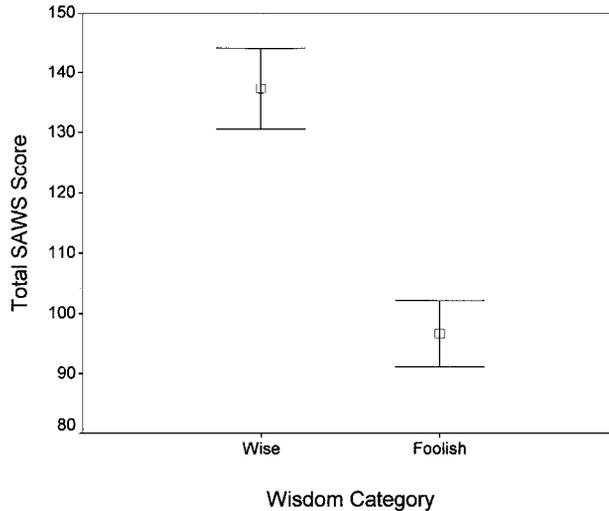
Half the sample was instructed to complete the SAWS as they thought a foolish person would; the other half as they thought a wise person would. The explicit instructions were as follows:

This study investigates the perceptions younger and older adults have about persons whom they perceive to be either wise or foolish. We all have basic ideas and beliefs about "wise" and "foolish" people, including how they think, act, and feel. This study asks you to think about a typical "wise" person by calling to mind all the relevant characteristics which you believe contribute to wisdom. Once you have these characteristics clearly in mind, please answer the following brief questionnaire not as you would personally answer it, but rather, *how you think a "wise" person would answer it*. Record your answers on the attached Data Sheet. Thank you.

For half the participants, the word "wise" was replaced by "foolish" in sentences 6 and 11 in the above instructions.

## Results

The mean SAWS score for the 44 participants requested to fill out the SAWS as they thought a foolish person would was 96.59 ( $SD$  = 18.04); for participants requested to fill out the SAWS as they thought a wise person would, the mean score was



**Fig. 1.** Total self-assessed wisdom scale (SAWS) score as a function of wisdom category.

137.24 ( $SD = 22.45$ ). A  $t$ -test indicated that this difference was highly significant;  $t(87) = 9.40$ ,  $p = .000$ . Figure 1 illustrates the nonoverlapping distributions of the “wise” and “foolish” scores.

## Discussion

*Webster's New World Thesaurus* (1971) lists “foolishly” as the antonym of “wisely.” People have relatively clear, easily accessible conceptions about these antithetical terms. In Study 2, participants used this implicit knowledge, or “folk psychology,” to discriminate between the responses of a prototypical wise or foolish person. If the SAWS measured a concept totally unrelated to wisdom (e.g., physical strength) then there should have been no differentiation between the two groups; however, if the SAWS measured a concept somewhat related to wisdom (e.g., creativity) then one might have predicted perhaps a mean difference but substantial overlap in score distributions between the wise and foolish conditions; alternatively, if the SAWS measured wisdom then one would have predicted the current results. Consistent with hypothesized predictions, then, the SAWS demonstrated excellent discriminant validity insofar as people’s implicit theories of wisdom are concerned.

Further confidence in the SAWS as a valid measure would accrue if it were associated with independent, theoretically relevant constructs. Study 3 serves to (1) replicate the reliability findings of Study 1, and (2) demonstrate the construct validity of the SAWS.

## STUDY 3

Given the reliability and discriminant validity of the SAWS documented in Study 1 and 2 respectively, Study 3 sought to demonstrate the construct validity of the SAWS by drawing on the psychosocial theory of Erikson (1963). As such, this study builds upon, and extends, the “implicit” theories approach of Study 2 by employing an “explicit” theoretical approach (Baltes & Staudinger, 2000; Sternberg, 1998).

Erikson postulates the emergence of certain ego strengths or virtues concomitant with the successful resolution of each of the eight hypothesized psychosocial crises which unfold over the entire life span. For the seventh stage, generativity versus stagnation, the assumed virtue or ego strength is “care”; for the eighth and final stage of development, ego integrity versus despair, the ostensible virtue or ego strength is “wisdom.” Thus, wisdom has been hypothesized to be an emergent property of a full life and to represent the epitome of psychosocial maturity. Support for this hypothesis has been offered by several studies (e.g., Kramer, 2000; Orwoll & Perlmutter, 1990; Wink & Helson, 1997).

Three main hypotheses are tested in Study 3. First, because Erikson’s stages are hierarchically organized, it is hypothesized that generativity and ego integrity will be positively correlated. Second, because wisdom is prosocially motivated and manifested in an interpersonal context (e.g., Baltes & Staudinger, 2000; Sternberg, 1998) we expect the SAWS to be positively associated with generativity. Finally, consistent with Eriksonian theory, we expect the SAWS to be positively associated with ego integrity.

## Method

### Participants

Thirty-nine men and 46 women, ranging in age from 22 to 78 years ( $M$  age = 52.54;  $SD = 9.67$ ), participated in Study 3. Participants were mostly Caucasian (65%), followed in descending order by Chinese (22.4%), Other (9.4%), and East Indian (2.4%) Canadian. The mean education level was 14.32 ( $SD = 3.44$ ) and the mean self-perceived health level was 5.18 ( $SD = 1.26$ ).

### Measures

Participants completed three measures in the current study. (1) *Wisdom*. Wisdom was measured with

the SAWS as in Study 1 and 2. (2) *Generativity*. Generativity was measured with the Loyola Generativity Scale (LGS; McAdams & de St. Aubin, 1992), a 20-item self-report scale assessing individual differences in generative concern. The subject rates each item on a 4-point scale ranging from 0 = *the statement never applies to you* to 3 = *the statement applies to you very often*. Statements from the scale include “I try to pass along the knowledge I have gained through my experiences,” “I try to be creative in most things that I do,” and “Others would say that I have made unique contributions to society.” Scores can range from 0 to 60. (3) *Ego integrity*. This study used a measure reported by Taft and Nehrke (1990), a 10-item scale in which participants indicated their level of agreement with a series of statements meant to reflect ego integrity. Half of the statements were worded in the negative direction and were meant to measure the negative pole of despair, and were reversed-scored during analysis; the remaining items were meant to assess integrity. Scoring instructions were modified slightly so that participants responded on a 6-point Likert-type scale where 1 = *strongly disagree* and 6 = *strongly agree*. Scores could range from 10 to 60. Sample items reflecting integrity include “I am willing to take responsibility for my decisions” and “I would not change my life if I lived it over”; items reflecting despair include “I am discontented with life” and “Life is too short.” Taft and Nehrke (1990) report reliability coefficients (Cronbach’s alpha) of .76 and .69 from two previous studies. In the current study, the reliability was .55.

## Results

A replication of the reliability findings of Study 1 were conducted. In Study 3, the total scale reliability was very good ( $r = .87$ ) producing an average reliability rating of .825 over the two studies.

### Correlational Findings

Zero-order correlations were used to investigate the relationship between demographic variables, total SAWS score, and the measures of generativity and ego integrity. As can be seen from Table II, none of the demographic variables were associated with ego integrity, whereas age, gender, and self-perceived health were all significantly correlated with generativity. Gender was positively correlated with wisdom ( $r = .291$ ), illustrating that women scored higher on the total SAWS in this sample.

**Table II.** Zero-Order Correlations Among Demographic Variables, SAWS and Generativity and Ego Integrity

Variable	1	2	3	4	5	6	7
1. Age	—						
2. Education	-.306**	—					
3. Gender	.015	.038	—				
4. Health	.078	.311**	-.054	—			
5. SAWS	.117	.051	.291**	.283**	—		
6. EIS	.168	.000	.087	.099	.225*	—	
7. LGS	.232*	.219	.335**	.223*	.439**	.303**	—

Note. SAWS = Self-assessed wisdom scale; EIS = ego integrity scale; LGS = Loyola Generativity Scale.

\* $p \leq .05$ ; \*\* $p \leq .01$ .

Although not the focus of the current study, the lack of association of age with ego integrity is somewhat problematic (see Discussion) given that older adults are purported to be engaged in this end-of-life task more than younger adults (Erikson, 1963).

Supporting hypothesis 1, generativity and ego integrity were positively correlated ( $r = .303$ ,  $p < .01$ ) suggesting that more generative adults are also more likely to have achieved a sense of ego integrity. In terms of construct validity, and consistent with predictions, the total SAWS score was significantly correlated with both generativity ( $r = .439$ ,  $p < .01$ ) and ego integrity ( $r = .225$ ,  $p < .05$ ), indicating that higher scores on the SAWS are predictive of higher scores on both theoretically relevant variables. As the reliability of the ego integrity scale (EIS) was relatively low in this study (.55), a reanalysis of the correlation between the SAWS and the EIS, as suggested by a reviewer of this article, correcting for attenuation, resulted in a stronger coefficient (i.e.,  $r = .325$ ).

Two other correlational findings are important to note. First, as can be seen in Table 2, age and total SAWS score is positively correlated at  $r = .117$ , a nonsignificant finding. This indicates that older adults are no more likely to score higher on the SAWS than younger adults.

A second finding of interest is the nonsignificant correlation between the total SAWS and educational level (i.e.,  $r = .051$ ). If we can view educational attainment as a crude proxy for intelligence, then this suggests that the SAWS truly measures wisdom uncontaminated by intelligence. This needs to be tested directly, however, with appropriate measures from standardized intelligence tests.

### Analysis of Variance Findings

This section examined wisdom as a discrete variable. Conceptualizing wisdom as a relatively rare

phenomenon, and guided by previous research (e.g., Kramer, 2000; Staudinger, 1999), the cutoff score for a “wise” designation on the SAWS was set relatively high. Specifically, scores greater than or equal to 152 on the SAWS were classified as wise; less than 152 as non-wise. This score is approximately one standard deviation above the mean in this sample ( $M_{SAWS} = 134.43; SD = 19.58$ ) and resulted in 63 (74.1%) and 22 (25.9%) participants designated as non-wise and wise, respectively.

As indicated above, generativity and ego integrity were significantly correlated and present a potential problem of multicollinearity when treated as joint dependent variables. The appropriate statistical treatment in this case is multiple analysis of variance (MANOVA). Accordingly, a 2 (non-wise versus wise) by 2 (gender) (MANOVA) was conducted, with generativity and ego integrity serving as the dependent variables. Results indicated an overall significant effect for both wisdom (Wilk’s lambda = .913,  $p = .026$ ) and gender (Wilk’s lambda = .856,  $p = .002$ ), but not for the wisdom by gender interaction. Univariate ANOVAs illustrated that wise persons scored higher than non-wise individuals on generativity and ego integrity;  $F(1, 81) = 4.08, p = .047$  and  $F(1, 81) = 5.72, p = .019$ , respectively. In terms of gender, women scored significantly higher than men only on the generativity scale;  $F(1, 81) = 12.50, p = .001$ .

## Discussion

In Study 3, persons designated as wise scored significantly higher on two independent, theoretically relevant concepts compared to individuals scoring below the SAWS cutoff criterion, demonstrating construct validity. Additionally, very good reliability ( $\alpha = .87$ ) indicated that the SAWS has high internal consistency.

The lack of an age effect is consistent with previous findings (e.g., Ardel, 1997), indirectly reinforcing the earlier contention that it is not chronological age per se which is important, but the specific types of experiences one encounters over the life course.

The lack of association with wisdom and education in the current study is noteworthy. In other approaches (e.g., Staudinger et al., 1997) measures of intelligence are positively correlated with performance outcome measures suggesting that a focus on the cognitive mechanics of wisdom will necessarily be partially explained by intellectual competencies. Apparently, then, the types of noncognitive skills and

competencies measured by the SAWS are not the ones learned in formal academic training; learning the date for the battle of the Plains of Abraham, or that the square root of 144 is 12 seemingly play a limited role in the development of emotional regulation, openness, reminiscence, and the other dimensions assessed by the SAWS.

The noncognitive emphasis of the SAWS also helps explain the observed gender difference. Ardel (1997) found that “. . . wisdom for men is more strongly characterized by cognition and less by affect than for women” (p. P19). As the SAWS is comprised in part by an explicit affective dimension, it is not surprising that women scored higher on this measure of wisdom.

Wise individuals are not miserly with their cultivated sagacity; rather, they share their wisdom with others, particularly younger adults, in the form of advice giving and support. This is illustrated by the findings with the LGS. Further, wiser people seem to have come to terms with their lived lives to date, having accepted responsibility for a freely chosen life path, a late life task Erikson (1963) termed ego integrity. This is illustrated by the findings with the EIS. Older adults did not score higher than younger adults on the EIS which is inconsistent with Erikson’s proposition. This may be partly due to the modest reliability of the EIS in this study ( $\alpha = .55$ ). Attempts to improve the EIS or use an alternate measure of ego integrity with better psychometric properties should be pursued. Unfortunately, few stand-alone measures of this construct are available.

## GENERAL DISCUSSION

Three studies investigated the psychometric properties of a newly developed self-assessed wisdom scale. Overall, the initial results are promising. The SAWS appears to be a highly reliable scale ( $\alpha$ ’s of .78 and .87 in Study 1 and 3, respectively) and demonstrates several types of validity.

First, because the SAWS samples broadly (i.e., 30 items, five dimensions) over the domain of wisdom, it has good content validity. Second, because mean responses on the SAWS for groups of individuals completing the instrument according to implicit views of diametrically opposed concepts (i.e., foolish vs. wise), were substantially different, the SAWS demonstrates excellent discriminant validity. Finally, because higher scores on the SAWS were associated with higher scores on independent, theoretically relevant concepts, it demonstrates construct validity. As

an initial attempt to capture important dimensions in a questionnaire instrument, then, the SAWS appears to be a good start. As in any exploratory research, however, several limitations should be noted and addressed in the future.

First, additional candidates for inclusion as dimensions of wisdom should be explored. Social intelligence and spiritual connectedness, for instance, may warrant investigation. Second, continued refinement of specific scale items may eliminate those which explain little overall variance. Once such consolidation of factor scores is achieved, future research can examine which of the five (or more) factors explains most of the variance in dependent variables. Third, the SAWS can be given to wise “nominees” to determine whether they score higher than either normal controls or nominees from a different category more or less related to wisdom (e.g., creativity, intelligence). This will extend the findings of Study 2 which investigated people’s implicit theories only. Fourth, noncognitive and cognitive facets of wisdom should converge. Convergent validity could be demonstrated by having participants complete the SAWS and have their responses to hypothetical dilemmas scored using the criteria of Baltes and colleagues. High correlations between the two measures would indicate they are both tapping similar concepts.

Improvements in future versions of the SAWS (currently underway), such as those suggested above, may provide a modest, yet important, piece of the wisdom puzzle; whether this occurs, as a wise person might say, only time will tell.

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