

Wisdom Predicting Well-Being and Ill-Being in the Old Age: A Time-Lag Verification

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Abstract

Wisdom can be understood as a resource for adaptation and adjustment that contributes to well-being in various demanding life circumstances, including aging as both a biological process and a sociohistorical phenomenon. This study aimed to investigate the relationship between wisdom and subjective well-being and ill-being in individuals over 60 years of age, using two independent groups assessed a decade apart. Well-being included self-esteem, self-rated health, and life satisfaction, while ill-being encompassed anxiety and depression symptoms. One group consisted of 113 participants aged 60–89 in 2012 and the other included 118 participants in 2022. Wisdom was assessed using the Self-Assessed Wisdom Scale (SAWS), which provided a total score and scores on five subscales: experience, emotional regulation, reminiscence/reflectiveness, humour, and openness. No significant differences were found between the two groups regarding life satisfaction, health, and overall wisdom, except that openness was slightly higher in 2022. Self-esteem, anxiety, and depression symptoms were higher in the 2022 group. When the groups were combined, age was weakly negatively associated with health and positively associated with anxiety symptoms, and women reported marginally higher anxiety levels. Controlling for age, gender, and group, wisdom dimensions modestly contributed to higher life satisfaction and self-esteem, to better health, and fewer anxiety and depression symptoms. Except for reminiscence/reflectiveness, the other four wisdom dimensions individually predicted at least one well-being variable, with emotional regulation and humour showing the strongest effects. These findings suggest that fostering wisdom throughout life may enhance well-being in old age.

Keywords: anxiety, cohort, depression, health, satisfaction with life, self-esteem

Introduction

There has been growing interest in the psychology of wisdom in scientific literature over the past several decades (Dong et al., 2023). This may be attributed to the increasing amount of information individuals encounter, the rising number of daily decisions, and the often complex, uncertain, and even contradictory situations

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in the world, which require approaches extending beyond mere knowledge or skills and call for wisdom (Dong et al., 2023). Wiser individuals tend to maintain smoother interpersonal relationships, exhibit dependability and autonomy, and demonstrate openness to novelty while considering the welfare of others (Wink & Staudinger, 2016).

H.E.R.O.(E). Model of Wisdom

This paper conceptualises wisdom as a multidimensional construct in which life lessons acquired through evaluative reflection enable individuals not only to develop personally but also to contribute to the common good (Webster et al., 2014). This perspective is embedded in the H.E.R.O.(E.) model (Webster, 2010, 2014), which encompasses five interrelated dimensions of wisdom: humour, emotional regulation, reminiscence/reflectiveness, openness, and experience. Critical life *experiences* refer to challenging events perceived as pivotal, uncertain, and potentially harmful, thus holding significant meaning during certain periods of life. *Reminiscence/reflectiveness* denotes the capacity to learn from past experiences, understand causality, and anticipate probable outcomes across diverse life contexts. Individuals with greater wisdom tend to engage in high-quality event reconstruction and analysis (Weststrate et al., 2018). Coping with challenging situations typically triggers strong emotional responses; wise individuals manage these effectively through *emotional regulation* (Webster, 2022), which involves emotional awareness, tolerance of ambivalent feelings, and appropriate modulation of emotional expression according to context (Glück et al., 2019). One adaptive emotional regulation strategy is the use of acceptable forms of *humour* (Horn et al., 2019). Wise individuals employ humour that is non-offensive, non-defensive, playful, and humble, fostering social bonding and tension reduction as effective coping mechanisms. Lastly, *openness* characterises wise people's tendency to approach various life situations with curiosity, sincerity, and broadened perspectives, embracing a non-judgemental stance, eagerness for novelty, and enthusiasm for learning from others (Glück et al., 2019).

Wisdom development is a dynamic interplay of cognitive, affective, and motivational resources that evolve interactively through experiential reflection (Staudinger & Glück, 2011). Although evidence indicates stability in wisdom (e.g., Ardelt, 2010; Webster, 2003, 2007; Webster et al., 2014), there is also data supporting its change across the lifespan. Some findings suggest that many older adults, particularly those scoring highest on wisdom scales, continue to grow wiser through life experiences, implying that wisdom may increase with age among individuals motivated and able to pursue its development (Ardelt, 2010). Conversely, wisdom appears to decline on average in very old age, specifically beyond age 75, potentially linked to declines in mental health (Baltes & Staudinger, 2000; Sternberg, 2005). Research also reports a curvilinear relationship between age and wisdom, with a peak in mid-adulthood, although the pattern varies by wisdom dimension (Ardelt

et al., 2018; Webster et al., 2014). Sternberg (2005) argues that individual differences in wisdom development are so pronounced that average trends may be of limited informative value.

Examining the five H.E.R.O.(E.) model dimensions reveals nuanced life-span trajectories. Webster et al. (2014) report that overall wisdom scores rise from young adulthood, peak at midlife, then decline. Specifically, critical life *experience* scores increase from young adulthood to midlife, then plateau or rise slightly in older adulthood. *Emotional regulation* similarly rises, peaks at midlife, and declines to young adult levels in later life. *Openness* and *humour* scores remain high and stable through young and mid-adulthood before declining in older age. *Reminiscence/reflectiveness* remains relatively stable across young, midlife, and older adults.

Wisdom, Subjective Well-Being, Ill-Being and Old Age

Wisdom is widely regarded as one of the most valued and highest achievements of human development, offering profound insight into the human condition. Therefore, it is pertinent to examine whether wisdom contributes to well-being (Baltes & Staudinger, 2000; Dong et al., 2023). As succinctly defined by Ryan and Deci (2001), well-being refers to optimal psychological functioning and experience. It can be conceptually divided into two overlapping but distinct dimensions: hedonic (subjective) and eudaimonic (psychological) well-being. The hedonic aspect encompasses the pursuit of pleasure, happiness, life satisfaction, and the absence of negative affect, while the eudaimonic dimension entails striving for a purposeful and meaningful life and the realisation of human potential or one's true nature (Ryan & Deci, 2001). Despite an age-related decline in physical health and functioning, self-reported subjective well-being tends to remain stable or even increase from middle adulthood into older age (e.g., Hansen & Blekesaune, 2022). However, after age 70, subjective well-being gradually declines, reflecting inevitable limitations in psychological adjustment (Buecker et al., 2023; Hansen & Blekesaune, 2022).

This research focused on the relationship between wisdom and subjective well-being, conceptualising wisdom as a resource for adaptation and adjustment that supports well-being across different life circumstances. Scholars suggest that becoming wiser through adverse life experiences is initially negatively associated with subjective or hedonic well-being (Weststrate et al., 2018). However, individuals with greater wisdom learn to value the insights gained from difficult times and develop gratitude for positive experiences, which enhances their subjective well-being (Weststrate & Glück, 2017). Wisdom may be particularly relevant for older adults facing declines and losses in areas such as health, abilities, income, social networks, and societal status. Although frequent or severe adverse events negatively impact older adults' subjective well-being, this effect is mitigated among those with high wisdom scores (Ardelt & Jeste, 2018). Thus, wisdom serves as a protective

factor or buffer in coping with inevitable hardships (Chen & Wang, 2021). Wiser older individuals tend to be proactive self-regulators with insightful capacities that enable them to navigate their environments skilfully and optimise their well-being (Etezadi & Pushkar, 2013). Conversely, older adults with lower wisdom levels are more reliant on physical health and favourable external conditions to maintain or enhance their well-being (Ardelt & Jeste, 2022). Empirical findings support the notion that higher wisdom attenuates the negative impact of adverse life circumstances on well-being (e.g., Ardel & Jeste, 2018; Webster, 2022). A key attribute of wisdom is cognitive flexibility—namely, the ability to consider multiple perspectives, broaden horizons, and challenge existing boundaries (Dong et al., 2023).

This research examined the relationship between wisdom and subjective well-being by incorporating both commonly used and less frequently utilised variables. In this study, subjective well-being included life satisfaction, self-assessed health, and self-esteem. *Life satisfaction* is a widely accepted measure in subjective well-being research, with a meta-analysis by Zacher and Staudinger (2018) demonstrating a robust positive correlation between self-assessed wisdom and life satisfaction. Wisdom, as a highly adaptive facet of human development, is also expected to correlate positively with other adaptive constructs such as *self-esteem*; however, this relationship remains relatively underexplored, with available studies confirming a positive association (Dong et al., 2023; Krause & Hayward, 2015). Although extensive literature addresses the connection between wisdom and mental health, studies focusing on its relationship with *physical health* are comparatively scarce. Evidence suggests that wisdom mitigates the adverse effects of poor physical health on mental health, and that wiser older adults tend to have more positive attitudes towards ageing, engage in better self-care, and lead healthier lifestyles, thereby enhancing their well-being (Zadworna, 2023; Zadworna & Ardel, 2025). In this research, ill-being comprised anxiety and depression symptoms. *Depression*, characterised by diminished perseverance, emotional regulation, and overall functioning, detracts from well-being (Reynolds III et al., 2022). Research indicates that individuals with higher wisdom scores exhibit fewer depression symptoms (Zacher & Staudinger, 2018), and Jeste and colleagues (2025) argue that depression constitutes a barrier to the attainment of wisdom. As a coping mechanism, the pursuit of wisdom may foster mental flexibility and tolerance for ambiguity, thus reducing or moderating *anxiety*; nonetheless, investigations into this relationship remain limited. One study conducted during the COVID-19 pandemic found that mild anxiety can positively motivate individuals to adopt healthy coping strategies in response to crisis situations (English et al., 2022).

Social Nature and Historical Context of Wisdom

Wisdom is not only a person-centred attribute but also fundamentally social in its source, acquisition, activation, function, and recognition (Staudinger et al., 2006).

The social nature of wisdom implies that it primarily addresses significant and demanding life problems, which are predominantly social in character. Wisdom is largely acquired and activated through interactions with others. Central to theories of wisdom is its function to balance self-interest with the interests of others and society as a whole. Moreover, wise individuals are expected to provide insight or advice, underscoring wisdom's social function. Recognition of what constitutes wisdom requires social consensus, indicating that wisdom is both expressed in and influenced by social contexts. These social contexts can either facilitate or constrain the development of wisdom. Sociohistorical contexts are also critical, as macro-level events shape individuals and their capacity to acquire wisdom. Chronological age, defined by birth year, places individuals within specific contexts (Elder & George, 2016). Elder and colleagues (2009) demonstrated that major traumatic events, such as wars, influence trajectories of personal growth. Nevertheless, few studies compare participants of the same age tested at different times using identical instruments. Wink and Staudinger (2016) argue that while significant social events delineate historical periods, wisdom measures relying more on abstract than concrete questions yield wisdom-related responses that are relatively uninfluenced by specific sociohistorical contexts. Their research spanning two decades found that the relationship between personality and wisdom produced comparable results between cohorts across different countries, suggesting that although cohorts face distinct challenges and insights, covariation patterns need not be affected. Weststrate and Glück (2017) propose that wiser individuals possess heightened awareness of life's uncertainty and unpredictability, leading them to savour small pleasures. Being self-aware and less dependent on external validation, wiser individuals adhere more closely to personal values and needs, thereby prioritising and fulfilling them more efficiently. Recently, Glück et al. (2022) confirmed that although wise individuals reflect more deeply on life's adverse aspects, they maintain high levels of well-being. It is likely that wiser people recognise their agency in choosing cognitive, emotional, and behavioural interpretations and reactions to external events.

This research addresses a gap in the study of wisdom, well-being, and ill-being among older adults born a decade apart. The primary aim was to investigate whether a relationship exists between wisdom and subjective well-being and ill-being in individuals over 60 years old, assessed using the same instruments in two independent groups examined a decade apart. The specific objectives were: (1) to determine whether the two groups differ in levels of wisdom; (2) to explore differences between the groups in aspects of subjective well-being and ill-being; (3) to examine the relationship between age and wisdom; (4) to investigate associations between age and well-being and ill-being; and (5) to assess the contribution of wisdom to subjective well-being and ill-being beyond the effects of age, gender, and group (2012 or 2022).

Based on previous research, the following hypotheses were formulated: H_1 , the two groups will not differ significantly in wisdom; H_2 , the groups will not differ in

well-being or ill-being variables; H_3 , oldest age will be negatively related to wisdom; H_4 , age will negatively correlate with life satisfaction, self-assessed health, and self-esteem, but positively correlate with anxiety and depression symptoms; and H_5 , wisdom will positively contribute to life satisfaction, health, and self-esteem, and negatively to anxiety and depression symptoms, independent of age and group (2012 or 2022).

Method

Two independent samples of individuals aged 60 to 89 years were examined using a time-lag design¹: 113 participants in 2012 and 118 in 2022. The mean age of the 2012 group was 72.39 years ($SD = 4.12$), and for the 2022 group it was 71.24 years ($SD = 7.42$), with no statistically significant difference between the groups ($t = 1.47$, $df = 229$, $p > .05$). The gender distribution was comparable, with 60 women and 58 men in 2012, and 60 women and 53 men in 2022 ($\chi^2 = 0.12$, $df = 1$, $p > .05$). Importantly, none of the participants from the 2012 group were included in the 2022 group.

Wisdom was assessed using the Self-Assessed Wisdom Scale (SAWS), developed by Webster (2003, 2007). With the author's permission, the scale was translated into Croatian, and a psychometric evaluation of the Croatian version produced a satisfactory factor structure, closely aligned with results obtained by the original author (Ambrosi-Randić & Plavšić, 2015). In the present study, Cronbach's alpha for the total score was .89 in 2012 and .90 in 2022. For the five subscales, reliability coefficients were as follows: experience (.77 in both groups), emotional regulation (.76 in 2012 and .75 in 2022), reminiscence/reflectiveness (.84 in 2012 and .79 in 2022), humour (.82 in 2012 and .84 in 2022), and openness (.71 in 2012 and .68 in 2022). Each SAWS subscale consists of eight items (Webster, 2007). The *experience* subscale captures exposure to a variety of situations, predominantly in interpersonal contexts and coping with life's challenges (e.g., "I've learned valuable life lessons from others."). *Emotional regulation* refers to the acceptance and regulation of both pleasant and unpleasant emotions (e.g., "I am good at identifying subtle emotions within myself."). *Reminiscence/reflectiveness* is the ability to draw on personal past experiences for present coping (e.g., "I often find memories of my past can be important coping resources."). *Humour* encompasses awareness of everyday ironies, the ability to put others at ease, and the use of humour as a coping strategy (e.g., "I can make fun of myself to comfort others."). *Openness* denotes receptivity to new ideas, values, and experiences, as well as curiosity and tolerance towards others (e.g., "I've often wondered about life and what lies beyond."). Participants responded to 40 items on a six-point scale (1 = *strongly disagree*, 6 = *strongly agree*), resulting in total scores ranging from 40 to 240, with higher scores indicating higher levels of wisdom.

¹ Due to the wide age range these samples are referred to as 'groups' rather than 'cohorts'.

Well-being comprises satisfaction with life, self-assessed health, and self-esteem.

Satisfaction with life was assessed with the question: “In general, how satisfied are you with your life?”. Responses ranged from 1 (*completely unsatisfied*) to 5 (*completely satisfied*). There is substantial evidence that such single-item life satisfaction measure is both reliable and valid (Cheung & Lucas, 2014; Jovanović & Lazić, 2020).

Health was assessed with the question: “How would you describe your current health status?” Responses ranged from 1 (*I have been suffering from an illness for a longer time.*) to 4 (*I am mostly healthy.*). Single-item self-rated health proves to be a sufficiently reliable and valid measure of health (Cullati et al., 2018; de Salvo et al., 2006).

Global self-esteem was measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1979), which consists of 10 items such as “I take a positive attitude toward myself.” Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating greater self-esteem. In this study, the scale demonstrated good internal consistency, with Cronbach’s alpha values of .84 (2012) and .81 (2022).

Ill-being consisted of anxiety and depression symptoms that were assessed using the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983), which includes seven items for each subscale (e.g., anxiety: “I feel restless as I have to be on the move”; depression: “I have lost interest in my appearance”), with response options ranging from 0 to 3. Cronbach’s alpha values for the anxiety subscale were .77 for both groups, and .71 (2012) and .68 (2022) for the depression subscale.

Age and gender were collected through open-ended questions.

The research formed part of a larger survey on wisdom. University students, trained in administering these measures, recruited adult participants according to specific age and gender criteria and conducted the assessments. The students received nominal course credit for their contributions. Participation in the study was anonymous and voluntary. The research design was reviewed and approved as ethical by the Research Ethics Committee of the Juraj Dobrila University of Pula.

Results

Wisdom, Well-Being and Ill-Being in 2012 and 2022

The analysis of skewness and kurtosis indicated that all distributions were approximately normal, with skewness up to -0.80 and kurtosis up to 3.61. These values fall within the commonly accepted ranges of ± 2 for skewness and ± 7 for kurtosis (Byrne, 2010; Hair et al., 2010), thus parametric analyses were deemed appropriate.

To determine whether the two groups of older adults, assessed ten years apart, differed in wisdom, well-being, and ill-being, *t*-tests were conducted; the results are presented in Table 1.

Table 1
Descriptive Data for Wisdom, Well-Being and Ill-Being

Variable	2012 group			2022 group			<i>t</i> -test	Cohen's <i>d</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>		
<i>Wisdom</i>								
SAWS	118	163.28	25.23	95	165.72	27.03	-0.68, <i>p</i> > .05	
Experience	118	37.21	6.73	101	38.23	6.32	-1.15, <i>p</i> > .05	
Emotional regulation	118	33.46	6.73	104	32.67	6.82	0.86, <i>p</i> > .05	
Reminiscence	118	35.55	7.75	108	34.48	7.14	1.08, <i>p</i> > .05	
Humour	118	31.64	7.92	110	33.76	8.43	-1.96, <i>p</i> > .05	
Openness	118	25.42	6.96	108	27.53	7.87	-2.14, <i>p</i> < .05	0.28
<i>Well-being</i>								
Life satisfaction	118	3.78	0.76	113	3.91	0.68	-1.34, <i>p</i> > .05	
Health	118	2.34	1.16	112	2.62	1.19	-1.79, <i>p</i> > .05	
Self-esteem	118	30.73	9.29	105	38.14	6.63	-6.79, <i>p</i> < .01	0.92
<i>Ill-being</i>								
Anxiety symptoms	118	8.49	3.90	111	14.71	3.90	-12.08, <i>p</i> < .01	1.59
Depression symptoms	118	8.06	3.65	108	14.24	3.52	-12.94, <i>p</i> < .01	1.72

Note. SAWS = Self-Assessed Wisdom Scale.

No significant differences were found between groups in satisfaction with life, self-assessed health, or overall wisdom, except for its dimension openness, which was marginally higher in the 2022 group. In contrast, self-esteem, anxiety, and depression symptoms were all significantly higher, with large effect sizes, in the 2022 group compared to 2012.

Age, Wisdom, Well- and Ill-Being

To examine the relationships among age, wisdom, well-being and ill-being, bivariate correlations were calculated. Given prior evidence that the relationship between age and wisdom may be curvilinear across the lifespan, age was analysed both linearly and quadratically (Webster et al., 2014). To prevent collinearity, age was centred on the mean prior to quadratic analyses. Quadratic trends between age and wisdom, as well as age and well-being and ill-being, were then tested using curve estimation regression analyses. Finally, hierarchical regression analyses were conducted to assess the extent to which wisdom contributed to subjective well-being and ill-being in older adults beyond the effects of age, gender, and group (2012 or 2022).

Correlations for the 2012 and 2022 groups are presented in Table 2.

Results presented in Table 2 indicate that, in both groups, total wisdom scores (SAWS) and most of its subscales were positively correlated with life satisfaction, self-esteem, and self-assessed health, and negatively correlated with depression symptoms. All observed correlations ranged from weak to moderate in strength. Fisher's z transformation tests revealed no significant differences in correlation magnitudes between the 2012 and 2022 groups.

Age associations with wisdom, well-being, and ill-being variables were predominantly weak and linear, with curvilinear patterns appearing only sporadically and modestly. In the 2012 group, *age* exhibited a negative linear association only with health, while in the 2022 group, it was negatively associated with total wisdom scores and its subscales of emotional regulation, humour, and openness. In the 2022 group, age was also negatively associated with self-esteem, health, and life satisfaction, and positively associated with anxiety and depression symptoms. Only three U-shaped relationships were observed, identified in both quadratic bivariate correlations (age^2) and regression analyses: life satisfaction, $R = .25$, $R^2 = .06$, $F(2, 115) = 3.60$, $p < .05$, $\beta = .220$, $p < .05$, and self-esteem (quadratic trend not significant, but $\beta = .207$, $p < .05$) in the 2012 group, and the wisdom dimension of experience, $R = .26$, $R^2 = .07$, $F(2, 87) = 3.17$, $p < .05$, $\beta = .263$, $p < .05$, in 2022. In sum, the explained variance is primarily attributable to the linear age term, with the quadratic age term not offering a significant contribution.

Table 2

Pearson's Coefficients of Correlation Between Gender, Age, Wisdom and Well-Being/Ill-Being in 2012 Group (Below Diagonal) and 2022 Group (Above Diagonal)

	Gender and age			Wisdom					Well-being					Ill-being		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
1. Gender		-.02	-.01	-.07	.03	-.13	-.29**	-.01	-.02	.10	.03	.02	-.23**	-.04		
2. Age	.08		.13	-.33**	-.01	-.22*	-.02	-.41**	-.37**	-.23*	-.31**	-.27**	.22*	.31**		
3. Age ²	.01	.10		-.03	.27**	-.16	-.03	.02	-.18	.02	-.06	-.08	.08	.09		
4. SAWS	.02	-.01	.06		.64**	.79**	.69**	.77**	.77**	.36**	.27**	.22*	-.09	-.33**		
5. Experience	.07	.03	.10	.66**		.36**	.46**	.29**	.32**	.14	.16	-.04	.12	-.01		
6. Emotional regulation	.04	-.08	.04	.74**	.22*		.51**	.52**	.56**	.36**	.35**	.22*	-.11	-.29**		
7. Reminiscence	-.14	.08	.01	.67**	.58**	.28**		.32**	.33**	.01	.01	-.03	.11	.10		
8. Humour	.04	-.02	-.04	.73**	.20*	.60**	.23*		.57**	.36**	.24**	.26**	-.18	-.41**		
9. Openness	.05	-.02	.09	.71**	.33**	.50**	.21*	.46**		.27**	.14	.25**	-.10	-.32**		
10. Life satisfaction	-.04	.11	.23*	.21*	.03	.25**	.01	.24*	.22*		.39**	.41**	-.40**	-.43**		
11. Self-esteem	-.01	.03	.19*	.34**	.15	.43**	.15	.24**	.25**	.52**		.39**	-.51**	-.64**		
12. Health	-.02	-.22**	.01	.16	-.10	.26**	.03	.14	.24**	.30**	.31**		-.38**	-.40**		
13. Anxiety symptoms	-.17	.06	.07	-.13	.16	-.32**	.10	-.29**	-.10	-.32**	-.32**	-.14		.45**		
14. Depression symptoms	-.12	.05	.06	-.43**	-.08	-.45**	-.16	-.45**	-.34**	-.49**	-.58**	-.27**	.52**			

Note. SAWS = Self-Assessed Wisdom Scale; Gender was coded as women = 0, men = 1.

* $p < .05$. ** $p < .01$.

Wisdom as a Predictor of Well-Being and Ill-Being

To determine whether wisdom accounted for unique variance in well-being and ill-being beyond the effects of age, gender, and group (2012 or 2022), hierarchical regression analyses (HRAs) were conducted. Variance Inflation Factors (VIF) were below 2.5 and Tolerance values exceeded 0.25, indicating acceptable collinearity levels (Senaviratna & Cooray, 2019).

In these analyses, group membership (2012 or 2022) was entered as a predictor in the first step, followed by age, age² (quadratic term), and gender in the second step, and finally the five SAWS subscales were added in the third step (Table 3).

Results presented in Table 3 indicate that group membership (2012 versus 2022) was a significant and robust predictor of self-esteem, anxiety, and depression symptoms across all three steps of the HRAs, with these outcomes tending to be higher in the 2022 group after controlling for age, gender, and wisdom. When controlling for group, age, and wisdom, gender emerged as a weak predictor of anxiety, with women exhibiting slightly more anxiety symptoms than men. Age remained a modest negative predictor of self-assessed health and a positive predictor of anxiety, even after adjusting for gender, group, and wisdom.

Wisdom, as measured by the five SAWS subscales, accounted for additional variance in all well-being and ill-being variables at the third step, explaining between 7% (health) and 14% (life satisfaction) of the variance. Except for reminiscence/reflectiveness, each of the other four wisdom subscales significantly predicted at least one well-being/ill-being outcome. Notably, the experience subscale was a negative predictor of health and a positive predictor of anxiety symptoms. Emotional regulation and humour were the dimensions most broadly predictive across well-being and ill-being variables.

Discussion

Wisdom, Well-Being and Ill-Being in 2012 and 2022

The question of whether two groups of people examined a decade apart differ in wisdom was previously addressed by Plavšić (2023) in a younger group of emerging adults aged 18 to 26 years. That study found no significant differences in wisdom between the 2012 and 2022 groups. Similarly, this research hypothesised (H_1) that there would be no differences in wisdom between older adults assessed in 2012 and 2022. This hypothesis was largely supported, as neither the total wisdom score nor its five subdimensions differed significantly between the two older adult groups, with the exception of openness, which was marginally higher in the 2022 group. The stability of wisdom over this decade among older adults may be explained by two main factors. First, wisdom is conceptualised as a higher-order cognitive and

Table 3*Results of HRA on Well-Being and Ill-Being With Five SAWS' Subscales in the 3rd Step*

Predictors	Well-being		Ill-being	
	Life satisfaction	Self-esteem	Health	Anx. symptoms Depr. symptoms
1st step				
Group (β)	.08	.41***	.13	.62*** .64***
F (df)	1.40 (1, 209)	42.99*** (1, 208)	3.79 (1, 211)	131.93*** (1, 210) 142.95*** (1, 207)
R (R^2)	.08 (.01)	.41 (.17)	.13 (.01)	.62 (.38) .64 (.41)
2nd step				
Group (β)	.02	.38***	.12	.63*** .64***
Age (β)	-.12	-.14*	-.26***	.14* .16**
Age ² (β)	.14	.08	-.00	-.01 .02
Gender (β)	.00	.00	-.00	-.14** -.08
F (df)	1.70 (4, 206)	12.28*** (4, 205)	4.80*** (4, 208)	38.15*** (4, 207) 40.01*** (4, 204)
R (R^2)	.18 (.01)	.44 (.18)	.29 (.07)	.65 (.41) .66 (.43)
ΔR^2	.03	.02	.07	.04 .03
3rd step				
Group (β)	-.01	.40***	.10	.64*** .67***
Age (β)	-.01	-.07	-.19***	.08 .05
Age ² (β)	.14	.07	.05	-.04 -.00
Gender (β)	-.03	.00	.01	-.14** -.06
Experience (β)	-.01	.06	-.18*	.17** .05
Emot. regul. (β)	.22**	.38***	.14	-.17** -.18**
Reminisc. (β)	-.14	-.07	.02	.07 .05
Humour (β)	.19*	.02	.03	-.17** -.21***
Openness (β)	.08	-.04	.18*	.04 -.08
F (df)	4.56*** (9, 201)	10.68*** (9, 200)	4.21*** (9, 203)	22.69*** (9, 202) 28.96*** (9, 199)
R (R^2)	.41 (.13)	.57 (.30)	.40 (.12)	.71 (.48) .75 (.55)
ΔR^2	.14	.13	.07	.08 .13

Note. All continuous variables are standardised; SAWS = Self-Assessed Wisdom Scale; Group was coded as 2012 = 1, 2022 = 2; Gender was coded as women = 0, men = 1.

* $p < .05$. ** $p < .01$. *** $p < .001$.

affective function that facilitates understanding and meaning-making across life experiences. Since every sociohistorical period presents a variety of personal and societal challenges, individuals have opportunities to engage with and adapt to complex events. Second, it is plausible that the two groups, separated by only ten years, share more similarities than differences in their life experiences and sociohistorical contexts. The observed similarities between groups may be attributed to the relatively wide age range in both groups compared to the ten-year interval between measurement points, potentially leading to generational overlap. Furthermore, the measure of wisdom employed general, period- and region-neutral questions, emphasising broad mastery rather than context-specific knowledge (Plavšić, 2023; Wink & Staudinger, 2016). Only in the wisdom dimension of openness did the 2022 group score marginally higher. Brandt et al. (2022) observed elevated levels of openness in participants born more recently, an effect particularly pronounced among older adults. These authors suggest that this trend may be a consequence of increased educational attainment and evolving gender roles in later cohorts.

Consistent with expectations (H_2), no significant group differences were found in life satisfaction or self-assessed health, although the 2022 group reported higher anxiety and depression symptoms. These outcomes may be explained by the exceptional crises prevailing in 2022: the outbreak of war in Ukraine, associated humanitarian and economic hardships, an influx of refugees invoking memories of the 1990s conflict in Croatia, and the climate crisis, notably the record-high temperatures across Europe that summer (Bruyninckx, 2022). Evidence suggests that such global and regional adversities, as well as persistent media coverage, can exacerbate anxiety and depression among older adults (White et al., 2024). Additionally, the impact of the COVID-19 pandemic may have contributed to these findings, although research referring to the year 2022 is not yet available. So far, the results are mixed, as there is evidence of increased anxiety (da Silva et al., 2021) and persistent depression symptoms following the COVID-19 pandemic (Dakanalis et al., 2025). However, there is also evidence that older people may be more resilient to anxiety and depression than younger populations, at least during the COVID-19 pandemic (Efstathiou et al., 2025; Vahia et al., 2020). Interestingly, the 2022 group also reported higher self-esteem. There is evidence that lower education levels are associated with lower self-esteem (Ryszewska-Łabędzka et al., 2022) and that proficiency with technology, particularly social media use, is strongly linked to higher self-esteem (Chen & Gao, 2022; Zhu et al., 2025). Since data on education levels and proficiency with technology for the groups in this study were unavailable, causal explanations cannot be made. It can only be assumed that the later-born group had a higher level of education and better technology skills, which may have contributed to their self-esteem. Namely, according to the 2011 census, 47.8% of individuals over 60 in Croatia had only basic education, 33.9% had secondary education, and 13.2% had higher education, compared to 32.8%, 48.1%, and 19%, respectively, in 2021 (Državni zavod za statistiku, 2011, 2021). Regarding

technology, in 2012 only 12% of individuals over the age of 64 in Croatia were computer users, and 11% used the internet, compared to 28% and 42%, respectively, in 2022 (Državni zavod za statistiku, 2012, 2022).

Age, Wisdom, Well-Being, and Ill-Being

Age was not significantly correlated with wisdom measures in the 2012 group; however, in the 2022 group, age was weakly negatively associated with nearly all wisdom variables, including total wisdom scores and the subscales of emotional regulation, humour, and openness. These findings align with hypothesis H_3 and mirror previous research indicating a decline in wisdom among the oldest-old, particularly those aged over 75 (Baltes & Staudinger, 2000). Prior studies have documented an inverted U-shaped trajectory of wisdom across adulthood, peaking in midlife and exhibiting variable patterns across different wisdom dimensions (Ardelt et al., 2018; Webster et al., 2014). Given that this study focused exclusively on older adults—beyond the typical wisdom peak—the observed slight linear decline with age may reflect general cognitive decline associated with ageing (Baltes & Staudinger, 2000; Sternberg, 2005). Specifically, reductions in fluid intelligence could limit performance on wisdom-related tasks used in the assessment (Baltes & Staudinger, 2000, p. 128). Ardel and colleagues (2018) suggest that the observed decline in wisdom with advancing age may also be attributed to increased rigidity and dogmatism, accompanied by decreased openness to experience.

The relationships between age, well-being, and ill-being support hypothesis H_4 . Specifically, age was a weak negative predictor of self-esteem and health, and a weak positive predictor of anxiety and depression symptoms after controlling for the group. These findings are consistent with prior evidence on age-related patterns in well-being and ill-being. Research indicates that many individuals are able to maintain relatively high levels of self-esteem throughout old age; however, after the age of 90, self-esteem tends to decline more markedly (Orth et al., 2018). Systematic declines in self-rated health among older adults are often associated with comorbidities, physical limitations, and depression, which frequently accompany the onset of chronic disease (Galenkamp et al., 2013; Zadworna, 2023). Life satisfaction tends to decline in late adulthood, likely because older adults experience more losses than gains in important life domains such as health, social relationships, and income; thus, vulnerabilities often outweigh strengths. Additionally, negative age stereotypes and perceived age discrimination play a significant role in this decline (Buecker et al., 2023). Increased anxiety among older adults is typically linked to a range of vulnerability and stress-related factors, whereas depression symptoms are more strongly associated with long-term vulnerabilities (Beekman et al., 2000). In this research, being a woman was a weak predictor of greater anxiety symptoms, a finding consistent with previous studies using the HADS, which also found a female disadvantage regarding anxiety in older birth cohorts (Sialino et al., 2021). These authors suggest that new stressors in old age—such as caregiving, widowhood, living

alone, and lower income—disproportionately affect women, who have been at higher risk of poverty in Croatia for decades (Državni zavod za statistiku, 2024). Furthermore, differences in coping strategies may also contribute to the observed gender differences in anxiety (Sialino et al., 2021).

Wisdom as a Predictor of Well-Being and Ill-Being

Except for the reminiscence/reflectiveness subscale, each of the other four wisdom dimensions significantly predicted at least one well-being or ill-being variable, even after controlling for age, gender, and group, providing support to hypothesis H_5 . However, the contribution of wisdom to the variance in well-being and ill-being was rather modest, explaining 7% of the variance in health, 8% in anxiety, 13% in self-esteem and depression symptoms, and 14% in life satisfaction. Emotional regulation and humour had weak positive contributions to life satisfaction, and negative contributions to anxiety and depression symptoms. Emotional regulation also contributed moderately positively to self-esteem, while openness contributed weakly to health. Notably, the experience subscale was a weak negative predictor of health and a weak positive predictor of anxiety symptoms.

The observed results align with those reported in previous research, which typically shows a weak to modest correlation between wisdom and subjective well-being and ill-being (Glück et al., 2022). These findings suggest that other important predictors not examined in the current study, such as education, physical health, social relationships, and income, likely account for additional variance in well-being and ill-being outcomes.

Examining the wisdom dimensions, several explanations can be proposed for their contributions, albeit relatively small, to enhanced well-being and reduced ill-being, irrespective of the time when participants were born. Although weakly, emotional regulation and humour appear to contribute most strongly, perhaps because they facilitate more active and adaptive coping strategies in response to life events, in contrast to the more passive qualities of experience, openness, and reminiscence/reflectiveness. Substantial evidence links emotional regulation to well-being (e.g., Glück et al., 2022; Puchalska-Wasył, 2023). Emotional regulation likely balances the interpretation and expression of emotions to fit circumstances (Glück et al., 2019). Research also indicates that older adults generally exhibit superior emotional regulation skills compared to younger adults and that effective regulation is essential for adaptive functioning in later life (Isaacowitz, 2022; Yadav & Chanana, 2018). There is strong empirical support that humour facilitates the reinterpretation of life's meaning in older adulthood (e.g., Cristini et al., 2024; Puchalska-Wasył, 2023). Cristini and colleagues (2024) suggest that humour contributes to various psychological outcomes, including pleasure, motivation, attractiveness, closeness, sympathy, atonement, leadership, conflict reduction, constructive attitudes, problem solving, downplaying adversity, acceptance,

resilience, perspective shifting, alternative meaning-making, and optimism. The positive, although weak, association between openness and health can be explained by the notion that individuals higher in openness accumulate diverse experiences and adapt effectively to change by exploring various coping strategies (Leeman et al., 2022; Webster, 2014). The wisdom dimension experience was found to be, albeit weak, a negative predictor of health and a positive predictor of anxiety, while reminiscence/reflectiveness showed no significant correlations with well-being and ill-being in either group. Puchalska-Wasył (2023) reported similar findings, observing that critical life experiences and reminiscence/reflectiveness were weak, negative, or non-significant predictors of general well-being. One explanation is that critical life experiences, although a potential source of wisdom, may initially diminish well-being due to their challenging nature; over time, however, reflective processes may render these experiences meaningful. Importantly, this process of deriving meaning is neither rapid nor automatic (Puchalska-Wasył, 2023).

In conclusion, the relatively modest contribution of wisdom to well-being and ill-being suggests that individuals with greater wisdom tend to perceive themselves as having at least slightly more control over their interpretations and actions, exhibit somewhat more adaptive coping when facing challenges, engage more actively with life (Etezadi & Pushkar, 2013), and demonstrate higher life satisfaction and lower anxiety and depression symptomatology than their less wise counterparts (Chen & Wang, 2021), independent of objective circumstances (Dong et al., 2023). Filling a gap in the literature on wisdom and well-being and ill-being, this study's findings demonstrate that these relationships can persist across contexts ten years apart.

In conclusion, the relatively modest contribution of wisdom to well-being and ill-being suggests that individuals with greater wisdom tend to perceive themselves as having slightly more control over their interpretations and actions, display more adaptive coping when facing challenges, engage more actively with life (Etezadi & Pushkar, 2013), and show higher life satisfaction alongside lower anxiety and depression symptoms than their less wise counterparts (Chen & Wang, 2021), independent of objective circumstances (Dong et al., 2023).

Conclusion

The main scientific contributions of this research may be summarised as follows: 1) Continuity of wisdom across contexts: Older adults in two groups, assessed ten years apart using identical methodology, exhibited more similarities than differences in overall wisdom and its dimensions. This finding supports the notion that wisdom, as an abstract and universal construct, remains relatively stable in societal contexts ten years apart; 2) Sensitivity of well-being and ill-being to societal change: In contrast, certain variables of well-being and ill-being (notably self-esteem, anxiety, and depression symptoms) were somewhat more sensitive to societal changes. Elevated self-esteem likely reflects generally increased educational

attainment in the population, while higher anxiety and depression in the 2022 group appear attributable to major global crises occurring in 2022; 3) Replication of age-related patterns: The research largely confirmed existing evidence of a weak negative association between age and both wisdom and well-being, as well as a positive association with ill-being. Notably, most associations were linear rather than curvilinear, suggesting that declines in older age may be gradual and continuous; 4) Gender differences in anxiety: The study reaffirmed that older women are slightly more likely than men to report anxiety symptoms, most likely due to a greater number and impact of stressors experienced in later life; 5) Wisdom as a positive predictor of well-being: Although the effect was relatively small to moderate, wisdom emerged as a positive predictor of life satisfaction, self-assessed health, and self-esteem, and as a negative predictor of anxiety and depression symptoms, independent of age, gender, and the ten-year gap between measurements. This points to the potential role of wisdom in supporting better decision-making, enhanced coping, and overall functioning in later life (Lindbergh et al., 2022).

From a practical perspective, this research suggests that fostering wisdom throughout life could be an effective way to enhance well-being (Glück, 2024) and reduce ill-being in older age. There is evidence that wisdom can be developed through targeted educational, psychosocial, or wisdom-related therapeutic interventions (Lee et al., 2020; Linden, 2014). Another important practical implication is the need to consider the broader social context, as individuals from varying demographic backgrounds are likely to face different challenges that impact their well-being and ill-being.

Several methodological limitations should be acknowledged. First, the age range within each group exceeded the temporal gap between measurement intervals, potentially masking generational differences due to group overlap. Future studies should consider employing more narrowly defined age cohorts, ensuring that the age span is less than the interval between assessment periods. Additionally, the absence of comprehensive demographic data such as educational attainment and socioeconomic status limited the ability to analyse their associations with wisdom, well-being and ill-being. Evidence from Croatia indicates that, during this ten-year period, there has been a shift in educational level as well as in computer and internet usage among older persons, so having such data about the participants would have been valuable. Another limitation pertains to the exclusive reliance on self-report instruments for the assessment of wisdom and related constructs. As noted by Staudinger and Glück (2011), individuals who possess higher levels of self-criticism—a trait associated with wisdom—may underreport their own levels of wisdom, potentially biasing results.

Despite these limitations, the findings of this study address a notable gap in the literature on time-lagged research into wisdom and its correlates in ageing, illuminating the enduring, albeit weak to moderate, role of wisdom in promoting well-being in later life. Given the study encompassed only two temporal

measurement points, it is recommended that future research adopt similar time-lagged designs over subsequent decades to track the interplay between wisdom, well-being, and ill-being across diverse historical and societal contexts.

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Mudrost kao prediktor dobrobiti i narušenog mentalnog zdravlja u starijoj dobi: provjera s vremenskim odmakom

Sažetak

Mudrost se može shvatiti kao resurs za prilagodbu koji doprinosi dobrobiti u raznim zahtjevnim životnim okolnostima, uključujući starenje kao biološki proces i sociopovijesni fenomen. Cilj je ovoga istraživanja bio istražiti odnos između mudrosti i subjektivne dobrobiti i narušenog mentalnog zdravlja kod osoba starijih od 60 godina, na dvjema neovisnim skupinama procijenjenima u razmaku od deset godina. Dobrobit je uključivala samopoštovanje, samoprocjenu zdravlja i zadovoljstvo životom, dok je narušeno mentalno zdravlje obuhvaćalo simptome anksioznosti i depresije. Jedna se skupina sastojala od 113 osoba u dobi od 60 do 89 godina u 2012. godini, a druga je uključivala 118 osoba u 2022. godini. Mudrost je ispitana s pomoću Ljestvice samoprocjene mudrosti (SAWS), pri čemu su izračunani ukupni rezultat i rezultati na pet podljestvica: iskustva, regulacije emocija, reminiscencije/refleksije, humora i otvorenosti. Nisu pronađene značajne razlike između dviju skupina u zadovoljstvu životom, zdravlju i ukupnoj mudrosti, osim što je otvorenost bila nešto veća u skupini iz 2022. godine. Samopoštovanje, anksioznost i depresivnost bile su više u skupini ispitanoj 2022. godine. Kada su skupine kombinirane, dob je bila slabo negativno povezana sa zdravljem, a pozitivno povezana sa simptomima anksioznosti, dok su žene izvješćivale o granično značajno višim razinama anksioznosti. Kada su kontrolirani dob, spol i skupina, dimenzije mudrosti umjereno su doprinijele većemu zadovoljstvu životom i samopoštovanju, boljem zdravlju i manjemu broju simptoma anksioznosti i depresije. Osim reminiscencije/refleksije, preostale četiri dimenzije mudrosti pojedinačno su predvidjele barem jednu varijablu dobrobiti, pri čemu su emocionalna regulacija i humor pokazali najjače učinke. Ti nalazi sugeriraju da poticanje mudrosti tijekom života može poboljšati dobrobit u starosti.

Ključne riječi: anksioznost, kohorta, depresija, zdravlje, zadovoljstvo životom, samopoštovanje

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