

Facilitating Meaningful Work: How Career Wisdom Relates to Well-Being

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While prior research has highlighted the promising role of career wisdom in facilitating career development, the mechanisms through which career wisdom fosters well-being remain unclear. To address this gap, the present study employed a time-lagged design to examine the longitudinal associations between career wisdom and three indicators of well-being—job satisfaction, life satisfaction, and work engagement—using work meaningfulness as a mediator. Based on a sample of U.S. workers ($N = 995$), the study found that work meaningfulness (measured at Time 2) mediated the positive relationships between career wisdom (Time 1) and subsequent job satisfaction and work engagement (Time 3). The mediating effect of work meaningfulness in the relationship between career wisdom and subsequent life satisfaction was relatively small. These findings provide important insights into the role of career wisdom and its underlying mechanisms in contemporary career development, particularly in the cultivation of work meaningfulness and workplace well-being. Limitations and directions for future research are also discussed.

Public Significance Statement

This study suggests that individuals who approach career decisions with wisdom—by accepting uncertainty, trusting their intuition, and embracing discomfort—are more likely to find their work meaningful, which in turn promotes greater job and life satisfaction and work engagement. These findings provide evidence that career wisdom helps people address a key and open-ended career challenge: discovering meaning in their work. Overall, the results highlight career wisdom as a personal resource that can foster meaningful work and workplace well-being amid today's increasingly uncertain career contexts.

Keywords: career wisdom, work meaningfulness, well-being, time-lagged, mediation

The significance of career development in human growth and well-being is widely recognized, drawing considerable attention from both practitioners and researchers. Historically, the field has championed a proactive and rational approach, emphasizing optimal decision making and active self-regulation (Savickas, 2015). This perspective has led to a wealth of research and practical applications, particularly in areas such as person–environment (P–E) fit and proactive career behavior (Holland, 1997; Parsons, 1909; Savickas, 2019). However, despite its contributions, emerging theoretical discussions and empirical findings suggest that career development also involves managing inherent uncertainty about the right choice and future possibilities (Krieshok

et al., 2009; Krumboltz, 2009). Relying solely on a rational and calculated approach may not always be feasible or beneficial because individuals must contend with ambiguity and factors beyond their control. Therefore, the assumption that one can achieve complete certainty or full personal control over their career trajectory can, at times, be counterproductive.

The challenge of navigating inevitable uncertainty is particularly salient when accounting for the contextual factors that shape career decision making and development, such as resources, privilege, and systemic oppression. The field has increasingly recognized the importance of contextual influences, especially social norms and environmental affordances (Hartung et al., 2010; Lent & Brown, 2020). Social norms, which entail implicit or explicit standards regarding appropriate career paths for specific social groups, often introduce pressure and bias when personal aspirations mismatch with societal expectations. Relatedly, environmental affordances can influence aspirations and access to desirable career outcomes, particularly among marginalized populations who lack resources or face discrimination. Crucially, despite progress toward inclusion and equity in the vocational world, enhanced cultural and social justice awareness does not necessarily eliminate the decision-maker's dilemma; rather, it may heighten decision uncertainty by exposing the stark conflict between individual aspirations and persistent systemic oppression (Duffy et al., 2016; Xu & Allan, 2025). This conflict creates a landscape of inevitable uncertainty that cannot be resolved through rational reasoning alone.

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Career Wisdom in Handling Ambiguous Career Challenges

Considering the limitations of an overemphasis on rational strategies, Xu (2024) introduced the concept of career wisdom. Specifically, career wisdom reflects a deliberate willingness to deviate from strictly rational or proactive career strategies to navigate ambiguous, open-ended career challenges. Career wisdom is grounded in the dual-process theory of career decision making (DTC; Xu, 2021, 2023; Xu & Flores, 2023), which underscores the critical role of managing uncertainty throughout one's career. Inspired by Simon's (1972) bounded rationality and the career field's recognition of the limitations of purely rational approaches (Krieshok et al., 2009; Krumboltz, 2009; Lent & Brown, 2020), the DTC posits two interrelated processes for making and adjusting to career decisions (Xu, 2021). The first process entails gathering and evaluating information to narrow down possible choices and decrease decision uncertainty (Process I). The second process recognizes the importance of deliberately disregarding some information, acknowledging that ambiguity regarding the right choice is unavoidable and mitigating the anxiety this ambiguity may cause (Process II).

A core principle of the DTC is that even though it is desirable to compile sufficient data to make reasoned decisions (Hastie & Dawes, 2010), not all relevant information is accessible. Such unknowable information includes long-term shifts in the labor market, the future adequacy and criticality of personal resources, and the unpredictable occurrence or intensity of systemic discrimination. Consequently, individuals must learn to tolerate incomplete information. This notion resonates with Krieshok et al.'s (2009) acknowledgment of intuitive and subconscious processes as well as Krumboltz's (2009) emphasis on the significance of unplanned or serendipitous events. Conversely, overemphasizing the quest for an ideal solution can promote procrastination or rash decision making as a means of escaping uncertainty. Research on the use of heuristics in complex, uncertain scenarios also highlights the value of discarding certain pieces of information when no single best path exists (Gigerenzer & Gaissmaier, 2011). Parallel findings on ambiguity intolerance suggest that it can impede exploration, clarity, and satisfaction in career development (e.g., Park et al., 2020; Xu, 2020b; Xu & Tracey, 2015, 2017).

Building upon the DTC, Xu (2024) recently connected the concept of information reduction to the broader wisdom literature and introduced career wisdom as a means to further validate the DTC. Initially described using a 4E model as its reflective dimensions—embracing ignorance, intuition, flow, and discomfort—career wisdom challenges conventional career approaches that rely heavily on proactive planning and rational decision making. Such traditional frameworks often underappreciate, if not entirely ignore, the adaptive utility of these nonrational dimensions (Hastie & Dawes, 2010; Savickas, 2015). Empirical studies subsequently refined this framework into three dimensions: embracing ignorance, trusting intuition, and accepting vulnerability (merging flow and discomfort). By incorporating not only the deliberate acceptance of knowledge gaps (as emphasized in the DTC) but also an openness to intuition and vulnerability, career wisdom supports DTC's core ambiguity management. This approach advocates for accepting and even embracing incomplete information, moving beyond conventional vocational perspectives that often overemphasize the maladaptive role of uncertainty. Hence, it enables

researchers to test the DTC more directly (particularly regarding adaptive strategies/competence) and offers practical value for career counselors and educators by presenting a constructive, trainable resource.

In contrast to established constructs, such as ambiguity tolerance and career adaptability, career wisdom plays a distinct role within the DTC's conceptual framework (Xu, 2021; Xu & Allan, 2025). Although ambiguity tolerance may lay the groundwork for career wisdom (Glück et al., 2019), career wisdom itself is more action oriented in how it deals with ambiguity. Likewise, while career adaptability focuses on psychosocial resources for coping with new or complicated career tasks, it conceptually prioritizes rational self-regulation (Savickas & Porfeli, 2012) and emphasizes self-efficacy in its measurement (Xu, 2020a). Conversely, career wisdom is based on accepting that uncertainty is inherent to career journeys and highlights specific strategies for working through these unknowns. Moreover, career wisdom aligns with the DTC's dialectical viewpoint, which values both information gathering and information reduction rather than advocating one over the other (Xu, 2021).

Beyond conceptual distinctions, career wisdom offers novel intervention possibilities that extend past the scope of ambiguity tolerance. While ambiguity tolerance is typically conceived as a relatively stable trait (Budner, 1962; Xu & Tracey, 2014), career wisdom represents a trainable skill. This distinction suggests that practitioners can work with clients to develop their capacity for making decisions amid incomplete information, utilizing intuition, and finding meaning in vulnerable experiences, particularly when a decision impasse has been reached. Evidence from Xu's (2024) study suggests that career wisdom not only predicts well-being over time (e.g., life and job satisfaction) but also promotes adjustment (e.g., career adaptability and work-life balance). This predictive utility, independent of stable personality traits, underlines the unique potential of career wisdom as a changeable and trainable asset in career intervention and education.

Although career wisdom and the DTC framework offer a broader perspective of career decision and adaptation in an unpredictable, imperfect world, research on this topic faces at least three limitations. First, while studies have supported the role of career wisdom in promoting various career outcomes, including well-being, the underlying mechanism remains unclear. According to the DTC and Xu's (2024) conceptualization of career wisdom, one plausible mechanism involves its role in addressing ambiguous, open-ended career challenges. However, to the best of our knowledge, this theoretical proposition remains unexamined. Addressing this gap would not only strengthen the empirical foundation of the DTC but also enhance the conceptual clarity and precision of career wisdom's application in career guidance. Second, from a methodological standpoint, while prior research has investigated the longitudinal predictions of career wisdom for career outcomes, it has not controlled for the autoregression of outcome variables. As a result, the observed temporal relationships remain open to alternative explanations, such as cross-sectional associations between career wisdom and baseline outcomes.

Third, although prior studies have explored the relationship between career wisdom and job and life satisfaction, its role in another form of well-being—work engagement—remains unclear. Work engagement is related to but distinct from satisfaction, as it involves not only a pleasure component but also an activation component (Schaufeli, 2017). In other words, it more directly

reflects commitment to and motivation in work-related activities than satisfaction does. Joo and Lee (2017) found that work engagement relates but differs from career and life satisfaction, while Schaufeli et al.'s (2008) study showed that work engagement relates to but differs from a negative form of well-being, burnout. Examining work engagement could therefore broaden our understanding of the role of career wisdom in well-being and vocational behaviors. To address these conceptual and methodological limitations, the present study employs a time-lagged design to examine a key mechanism—work meaningfulness—in the relationship between career wisdom and job satisfaction, life satisfaction, and work engagement. Life satisfaction is also included as an outcome variable, as it provides a broader perspective on well-being and helps capture the spillover effects of career wisdom beyond the work domain.

Meaningful Work as an Important yet Ambiguous Career Challenge

Meaningful work represents an important ambiguous, open-ended career challenge that could potentially link career wisdom to other outcomes. Meaningful work, or work meaningfulness, broadly refers to people's felt experience that their work is important, significant, and worthwhile (Allan, Batz-Barbarich, et al., 2019). In addition, more specific operationalizations of meaningful work outline its multidimensional components, such as work that contributes the greater good, helps people make sense of themselves and the world, and provides positive meaning (Steger et al., 2012). Finding and experiencing meaning represents an innate human drive and need (Frankl, 1985), which translates to meaningful work as a subdomain of general meaning in life. For example, people are typically willing to accept substantially less income to have meaningful work (Hu & Hirsh, 2017), most college students prioritize meaningful work over other values (Allan et al., 2017), and the desire for meaningful work is consistent across various demographic characteristics, such as social class (Autin & Allan, 2020). Therefore, obtaining meaningful work represents a critical career task that translates across groups.

Whether someone experiences meaningful work is determined by the confluence of individual-, job-, organizational-, and societal-level factors (Lysova et al., 2019). For example, meaningful work theory and research have outlined how dispositional factors (e.g., personality), characteristic adaptations (e.g., goals, motives, strivings), and personal narratives (e.g., self-defining stories) shape whether someone experiences meaningful work (Barrick et al., 2013; Lysova et al., 2019). However, this process is complex because scholars have argued that there are two separate forms or conceptualizations of meaningful work (Lepisto & Pratt, 2017). Specifically, the first perspective—realization—emphasizes how people achieve meaningful work through self-actualization and self-determination, often by seeking jobs that match their abilities and allow them to maximize self-expression. This realization process often involves difficult trade-offs among complex and sometimes competing sources of information, creating an ambiguous decision context (Krumholtz, 2009). By contrast, the justification perspective highlights how people navigate uncertainty and subjectivity to develop an account that explains why their work is worthwhile (Lepisto & Pratt, 2017). Therefore, justification involves solving modern existential dilemmas, whereby people must discern their

personal values and develop explanations for how work expresses these values (Allan, Batz-Barbarich, et al., 2019).

This latter process has become especially important in the 21st century, as the labor market has graduated shifted away from stable, permanent employment (with long job tenures) to more unstable, temporary employment. This environment shifts the responsibility of providing justifications for meaningful work from organizations to individuals, who must create meaningful work for themselves and translate it across multiple jobs and opportunities (Allan & Liu, 2020). In other words, rather than being dictated by an organization's mission, meaningful work becomes even more subjective and unstable, with each person defining it based on their own values, aspirations, and personal narratives (Allan, Batz-Barbarich, et al., 2019). Taken together, finding and experiencing meaningful work in the contemporary labor market are highly ambiguous and dynamic processes.

In this context, career wisdom represents a critical personal resource that fosters meaningful work by enabling individuals to manage ambiguity, reconcile complex or conflicting needs, and develop personal justifications. Specifically, according to the DTC, career wisdom facilitates both Process I and Process II in career decision making and adaptation—namely, reducing uncertainty and mitigating the threat of uncertainty—and thereby promotes beneficial career outcomes, such as meaningful work (Xu, 2021). This is consistent with the two perspectives on meaningful work, with realization aligning with P-E fit in Process I and justification aligning with successfully navigating ambiguity in Process II. For example, within Process I, P-E fit is strongly related to meaningful work (e.g., Duffy et al., 2019), but Process II may be uniquely important for meaningful work in contemporary contexts. In short, by helping individuals manage ambiguity, career wisdom may reduce their obsession with finding the best work and provide the flexibility needed to construct narratives that support the experience of meaningful work.

Although the DTC refers to outcomes generally, theory and research have generally established meaningful work as an antecedent of more distal outcomes (Allan, Batz-Barbarich, et al., 2019). For example, through meta-analytic structural equation modeling, Allan, Batz-Barbarich, et al. (2019) established that meaningful work was best positioned as a predictor of job satisfaction, work engagement, and organizational commitment rather than representing a unified construct. Meaningful work also had large meta-analytic correlations with other job attitudes and well-being outcomes, including life satisfaction, general health, and meaning in life (Allan, Batz-Barbarich, et al., 2019). In sum, meaningful work might be a foundational workplace well-being variable that promotes other positive outcomes.

Taken together, evidence suggests that career wisdom may predict distal well-being outcomes (job satisfaction, life satisfaction, work engagement) via meaningful work, which is supported by initial studies. For example, Allan, Owens, and Douglass (2019) found that perspective (which is a character strength within the virtue category of wisdom) predicted burnout via meaningful work in a sample of mental health counselors. However, no studies have examined whether the general construct of wisdom or career wisdom specifically predicts meaningful work, let alone longitudinally examine whether meaningful work mediates career wisdom and other outcomes.

Summary of the Present Research

In summary, while prior research has supported the role of career wisdom in well-being, the present study proposes work meaningfulness as a key mechanism in this relationship. Drawing on the DTC (Xu, 2021, 2023; Xu & Flores, 2023), we employed a time-lagged design to test a mediation model in which career wisdom predicts subsequent job satisfaction, life satisfaction, and work engagement through work meaningfulness (see Figure 1).

We hypothesized that work meaningfulness would mediate the positive relations from career wisdom to subsequent job satisfaction (Paths $a \rightarrow b$, Hypothesis 1), life satisfaction (Paths $a \rightarrow c$, Hypothesis 2), and work engagement (Paths $a \rightarrow d$, Hypothesis 3). To account for potential direct predictions of career wisdom for well-being outcomes beyond work meaningfulness, we freely estimated the direct paths from career wisdom to each of the three well-being indices.

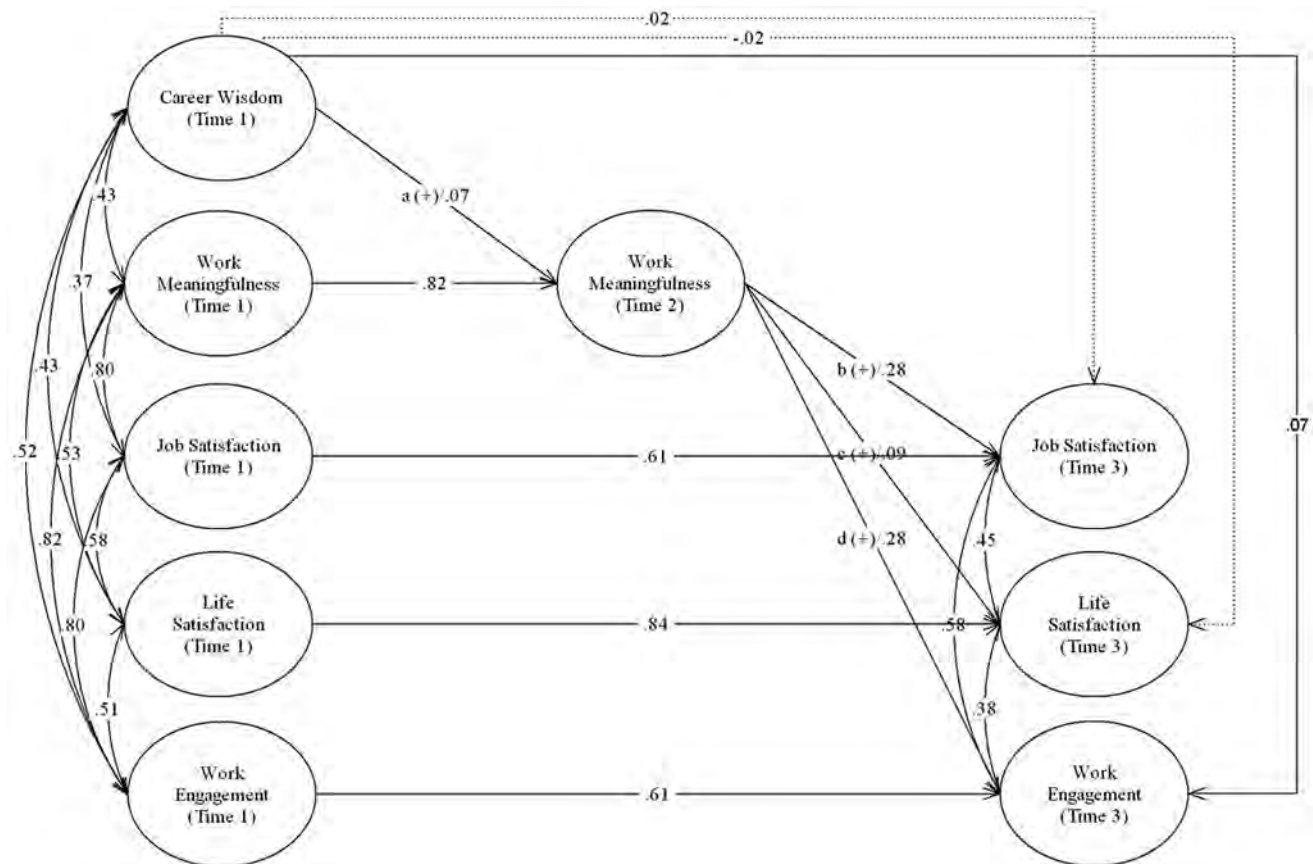
Method

Participants

We conducted a 6-month longitudinal study tracking 995 U.S. workers across three time points (Time 1: $n = 995$; Time 2: $n = 714$; Time 3: $n = 505$). Participants ranged in age from 18 to 65 years

($M = 39.11$, $SD = 11.11$). At the initial assessment, 41.0% ($n = 410$) identified as men, 55.4% ($n = 554$) as women, and 2.3% ($n = 23$) as gender nonbinary. The racial and ethnic composition of the sample at Time 1 included 61.1% ($n = 611$) White/European American, 15.8% ($n = 158$) African/African American/Black, 6.7% ($n = 67$) Hispanic/Latinx American, and 10.3% ($n = 103$) Asian/Asian American. Additionally, 0.2% ($n = 2$) identified as Native Hawaiian/other Pacific Islander, 0.6% ($n = 6$) as American Indian/Native American, 0.3% ($n = 3$) as Arab American/Middle Eastern/North African, and 4.1% ($n = 41$) as multiracial. Regarding educational attainment, 8.3% ($n = 83$) of participants reported a high school diploma, 18.1% ($n = 181$) reported some college, 10.1% ($n = 101$) reported an associate degree, 41.2% ($n = 412$) reported a bachelor's degree, and 21.8% ($n = 218$) reported a graduate degree. Participants also reported their subjective social class: 3.0% ($n = 30$) identified as living in poverty, 34.1% ($n = 341$) as working class, 48.3% ($n = 483$) as middle class, 13.3% ($n = 133$) as upper middle class, and 0.7% ($n = 7$) as upper class. Despite participant attrition over time, the demographic composition across the three waves remained consistent. A chi-square test revealed no statistically significant differences in demographic distribution across waves, indicating that the sample's representativeness was preserved throughout the study.

Figure 1
Structural Model With Hypothesized Paths and Standardized Coefficients



Note. The symbols in parentheses represent the hypothesized predictive directions. All paths are significant at $p < .05$, except for the dotted lines.

Measures

Career Wisdom (Wave 1)

Career wisdom was measured at Time 1 using the 20-item Career Wisdom Scale (CWS; Xu, 2024). This scale consists of three subscales: embracing ignorance, embracing intuition, and embracing vulnerability. Sample items include statements such as “I’m okay with making choices without knowing everything” and “I’m comfortable adapting to whatever comes my way.” Participants were instructed to read an introduction about ambiguous, open-ended career challenges and then asked to rate each item describing their experiences when dealing with such challenges. Items were rated on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores indicating a greater tendency to apply career wisdom in decision making. Xu (2024) previously reported strong reliability for the CWS, with internal consistency coefficients of .91 and .92 for the total scale. Additionally, construct validity was supported by findings showing that career wisdom uniquely predicted well-being and adjustment outcomes beyond personality traits. The results also showed that the general factor or the total score contributed to the majority of the predictive utility of the CWS, supporting the use of the total scale. In the present study, the overall CWS demonstrated excellent internal consistency, with an α coefficient of .91.

Work Meaningfulness (Waves 1 and 2)

We used the Work and Meaning Inventory (WAMI; Steger et al., 2012) to measure the experience of meaningful work. The WAMI consists of three subscales, including positive meaning, meaning-making through work, and greater good motivations. Two sample items are “I have found a meaningful career” and “The work I do serves a greater purpose.” Participants rated each item on a 5-point Likert scale ranging from 1 (*absolutely untrue*) to 5 (*absolutely true*), with higher total scores indicating greater work meaningfulness. Steger et al. (2012) reported evidence for the internal consistency of the WAMI ($\alpha = .93$) and found support for the construct validity of the WAMI in its positive associations with work-specific and general well-being indices. The present study found α coefficients of .95 and .95 for the first and second waves, respectively.

Job Satisfaction (Waves 1 and 3)

We assessed job satisfaction using the Job Satisfaction subscale from the Michigan Organizational Assessment Questionnaire (Cammann et al., 1979). A sample item from the scale is, “Overall, I am satisfied with my job.” Participants responded on a 7-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores reflecting greater job satisfaction. A meta-analysis by Bowling and Hammond (2008) provided strong support for the internal consistency of the Job Satisfaction subscale ($\alpha = .84$) and its construct validity, demonstrating associations with various antecedents, consequences, and correlates of job satisfaction. In the present study, the Job Satisfaction subscale demonstrated excellent internal consistency reliability, yielding α coefficients of .93 and .94 for the first and third waves, respectively.

Life Satisfaction (Waves 1 and 3)

We measured life satisfaction using the Satisfaction with Life Scale (Diener et al., 1985), a well-established tool frequently utilized in psychological research (Diener et al., 2013). The Satisfaction with Life Scale comprises five items, including statements such as “The conditions of my life are excellent.” Participants responded on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores reflecting greater life satisfaction. Diener et al. (2013) provided strong empirical support for the scale’s internal consistency, consistently reporting reliability coefficients above .80, as well as construct validity, demonstrating positive associations with both self-reported and objective indicators of satisfaction. In the present study, the Satisfaction with Life Scale exhibited excellent internal consistency, yielding α coefficients of .93 and .94 for the first and third waves, respectively.

Work Engagement (Waves 1 and 3)

We used the widely adopted nine-item Utrecht Work Engagement Scale (Schaufeli et al., 2006) to measure work engagement. The Utrecht Work Engagement Scale comprises three subscales: vigor, dedication, and absorption. Two sample items are “At my job, I feel strong and vigorous” and “I am enthusiastic about my job.” Participants rated each item on a 7-point Likert scale ranging from 0 (*never*) to 6 (*always*), with higher total scores indicating greater work engagement. In a cross-nation study, Schaufeli et al. (2006) reported α coefficients of the total scale being consistently greater than .80 and found evidence for the construct validity of the Utrecht Work Engagement Scale in its association with burnout. The present study found α coefficients of .93 and .94 for the first and third waves, respectively.

Procedure

This study utilized data from a larger research project examining the development and impact of career wisdom; however, it is conceptually and empirically distinct from other work derived from this project. Specifically, the present article focuses on career wisdom as a predictor of longitudinal changes in well-being. By contrast, other studies utilizing this data set have examined (a) the reciprocal relationship between career wisdom and proactive career behaviors (Xu, 2025) and (b) the role of career wisdom in predicting subsequent job performance (Xu, 2026). There is no overlap in theoretical purpose, hypotheses, dependent variables, or structural analyses between the present study and these other works. After securing approval from the institutional review board, participants were recruited via Prolific—a widely used crowdsourcing platform known for producing high-quality data at a cost-effective rate (Palan & Schitter, 2018). Participants received monetary compensation for their participation.

In the first wave, individuals completed an online survey that included demographic questions and the measures of career wisdom, work meaningfulness, and all three types of well-being. To ensure data quality, four attention-check items were embedded (e.g., “Please select ‘Strongly disagree’”). Of the 1,000 responses collected, 995 met the validity criteria. Three months later, the second wave invited the initial participants to complete a survey assessing work meaningfulness. Similar validity checks were applied, resulting in 714

valid responses. Another 3 months later, the third wave assessed job satisfaction, life satisfaction, and work engagement, with the original sample being invited once again. After applying screening criteria, 505 responses were retained. The 3-month interval was selected to allow sufficient time for the longitudinal unfolding of the hypothesized mediation process (i.e., from career wisdom to meaningful work and subsequent well-being) while minimizing attrition and the confounding influence of major external life events, consistent with previous research (Allan, 2017; Sonnentag, 2015). To maintain anonymity and confidentiality, participant responses remained de-identified throughout all waves. Prolific IDs were used strictly for the purpose of linking responses across waves, ensuring a secure and reliable longitudinal data set.

Analysis

We used structural equation modeling to test the proposed mediation model, which examined the relationships among career wisdom, work meaningfulness, job satisfaction, life satisfaction, and work engagement. The subscales of career wisdom, work meaningfulness, and work engagement represented their respective latent constructs, while items from job and life satisfaction indicated their respective latent constructs (they had no subscales). Following model evaluation guidelines from Hu and Bentler (1999) and Kline (2015), we assessed the measurement and structural model fit using these criteria: robust χ^2 , comparative fit index > .90, root-mean-square error of approximation < .08, and standardized root-mean-square residual < .08. To account for potential nonnormality, we applied robust maximum likelihood estimation in Mplus 8. Additionally, we addressed missing data using full information maximum likelihood estimation, which produces reliable parameter estimates even with up to 50% attrition (Collins et al., 2001; Schlomer et al., 2010). To test the mediated predictive paths, we conducted a bias-corrected bootstrapping mediation analysis with 1,000 replications, following Cheung and Lau's (2008) simulation-based recommendations.

Transparency and Openness

The data and research materials are available upon request to the corresponding author. The study was not preregistered. We adhered to American Psychological Association style and the Journal Article Reporting Standards for citation and reporting practices.

Results

Before conducting the main analyses, we assessed the normality of the data. The absolute values of skewness and kurtosis for all variables remained below 2, suggesting no severe deviation from normality that would threaten the validity of our results (Weston & Gore, 2006). Additionally, the sample size was sufficient for structural equation modeling, considering the number of estimated parameters and the adequate factor loadings (Kline, 2015). These conditions justified proceeding with the structural analysis. Table 1 presents the means, standard deviations, and correlations of the study variables.

We first tested Model 1 (the measurement model), in which all latent variables were freely correlated. Model fit indices indicated good fit to the data, $\chi^2(384) = 1033.55$, root-mean-square error of

approximation = .041, standardized root-mean-square residual = .040, comparative fit index = .97. Next, we examined Model 2 (the structural model), which proposed that career wisdom predicted subsequent job satisfaction, life satisfaction, and work engagement through the mediation of work meaningfulness. Model 2 also showed good model fit, $\chi^2(396) = 1097.17$, root-mean-square error of approximation = .042, standardized root-mean-square residual = .043, and comparative fit index = .97. Additionally, an inspection of the residual correlations confirmed that no critical paths were omitted, supporting the local fit of Model 2. Based on these findings, we retained Model 2 as the final model for mediation analysis (see Figure 1).

To gain preliminary insights into the relationships among the variables, we examined the individual regression paths within Model 2. As hypothesized, career wisdom (Time 1) positively predicted work meaningfulness (Time 2), which in turn positively predicted job satisfaction, life satisfaction, and work engagement (Time 3). Notably, career wisdom did not directly predict job satisfaction and life satisfaction (but directly predicted work engagement), suggesting work meaningfulness as the primary mechanism linking career wisdom to job satisfaction and life satisfaction. These results offer initial support for the proposed mediation model.

To further evaluate the hypothesized mediation paths, we tested indirect effects using 95% confidence intervals. Results indicated that work meaningfulness mediated the relationship between career wisdom and subsequent job satisfaction (.019, CI [.004, .040]), life satisfaction (.006, CI [.001, .016]), and work engagement (.019, CI [.005, .040]). However, the mediation effect estimate for life satisfaction was relatively small (.006), especially in comparison to the other two mediation paths. Overall, these findings provide evidence mainly for the mediating role of work meaningfulness in the links between career wisdom and job satisfaction and work engagement (Paths a $\rightarrow$ b and a $\rightarrow$ d).

In addition, we conducted a series of sensitivity analyses (multigroup structural equation modeling for gender and race; interaction modeling for socioeconomic status) to examine if the longitudinal wisdom-meaning-well-being mechanism varied by social location. Results provided evidence for structural invariance. Specifically, the path from career wisdom to meaningfulness did not differ by gender ($p = .228$), race ($p = .194$), or socioeconomic status ($p = .467$). Similarly, the subsequent links from meaningfulness to well-being outcomes were robust across all social locations ($ps > .245$). These findings suggest that the psychological utility of career wisdom functions as a consistent adaptive resource, facilitating meaningful work and well-being regardless of an individual's social standing.

Discussion

To elucidate the mechanism by which career wisdom relates to well-being, this study employed a time-lagged design to test whether career wisdom predicted job satisfaction, life satisfaction, and work engagement via meaningful work. The findings indicated that work meaningfulness mediated the positive relationships between career wisdom and subsequent job satisfaction and work engagement, supporting Hypotheses 1 and 3. However, the mediation of work meaningfulness in the relationship between career wisdom and subsequent life satisfaction (Hypothesis 2) was not supported. These findings offer important insights into the role of career wisdom and

Table 1
Means, Standard Deviations, and Correlations of the Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
Time 1											
1. Career wisdom	4.85	0.90	—								
2. Work meaningfulness	3.62	1.00	.36**	—							
3. Job satisfaction	5.05	1.65	.31**	.73**	—						
4. Life satisfaction	4.30	1.59	.38**	.48**	.54**	—					
5. Work engagement	3.41	1.04	.42**	.70**	.70**	.47**	—				
Time 2											
6. Work meaningfulness	3.61	1.00	.35**	.83**	.63**	.43**	.65**	—			
Time 3											
7. Job satisfaction	4.95	1.74	.28**	.64**	.79**	.53**	.65**	.69**	—		
8. Life satisfaction	4.33	1.63	.33**	.49**	.51**	.88**	.45**	.47**	.59**	—	
9. Engagement	3.39	1.08	.42**	.64**	.61**	.45**	.82**	.69**	.71**	.51**	—

Note. *Ns* = 995, 714, and 505 at Times 1, 2, and 3, respectively.

***p* < .01.

its effect mechanisms in contemporary career development and the cultivation of work meaningfulness.

Meaningful Work as a Link Between Career Wisdom and Well-Being

The present study provides insights into how career wisdom shapes job satisfaction and work engagement through the mediation of work meaningfulness. While prior research, such as Xu's (2024) study, identified a general predictive relationship between career wisdom and subsequent job satisfaction, our findings offer a more nuanced understanding and stronger evidence of career wisdom's potential role in enhancing job satisfaction. Xu's research primarily compared career wisdom with personality traits, focusing on scale development. By contrast, our study controlled for baseline job satisfaction, thereby assessing whether career wisdom predicted the development of job satisfaction over time. The results suggest that individuals who practice career wisdom, as manifested through embracing ignorance, intuition, and vulnerability in their career decision making and adaptation, are more likely to experience increased job satisfaction in the future, irrespective of their initial satisfaction levels.

Moreover, our study is the first to elucidate the mediating role of work meaningfulness in the relationship between career wisdom and well-being. This mediation indicates that practicing career wisdom enhances job satisfaction, likely by fostering a sense of meaning in one's work. Notably, after controlling for baseline job satisfaction, career wisdom predicted subsequent job satisfaction with an indirect effect estimates of 0.019. To evaluate the magnitude of the indirect effects, we followed the multiplicative logic of mediation (MacKinnon, 2012). Given the time-lagged design, we used the empirical benchmarks proposed by Orth et al. (2024) for direct paths (.03, .07, and .12). By squaring these values to account for the two-legged nature of the indirect path, we established benchmarks of .001 (small), .005 (medium), and .014 (large). Our observed indirect effect of .019 exceeds the threshold for a large effect in a longitudinal context. Additionally, Wen and Fan (2015) recommended evaluating the mediation effect size by calculating the proportion of the indirect effect relative to the total effect, which in this case is 54.29% (.019/.035). Collectively, these findings indicate a meaningful prediction of career

wisdom for job satisfaction, with work meaningfulness serving as a significant mediator.

Furthermore, our study is the first to establish a link between career wisdom and work engagement, highlighting career wisdom as a valuable resource for enhancing dedication and activation within the workplace. Drawing from meaningful work theory and research (Schaufeli, 2017), career wisdom likely functions as a characteristic adaptation that provides the flexibility and ambiguity tolerance necessary to find or craft meaningful work amid complex personal and environmental factors, which in turn promotes work engagement. Specifically, the findings suggest that individuals who incorporate ignorance, intuition, and vulnerability into their career decision making and adaptation processes tend to exhibit higher work engagement, potentially due to a greater sense of meaningful work. In comparison to the mediation effect observed between career wisdom and job satisfaction, the relationship between career wisdom and work engagement demonstrated a comparable large indirect effect of 0.019, as per Orth et al.'s guidelines. The mediation of work meaningfulness accounted for 21.35% (.019/.089) of this total effect, indicating that while career wisdom is a notable predictor of work engagement, other salient mediators beyond work meaningfulness may also play a role.

Conversely, our study did not find strong evidence supporting the prediction of subsequent life satisfaction by career wisdom (as shown by a weaker indirect effect, .006), a finding that slightly diverges from Xu's (2024) study. Although we anticipated that career wisdom would more directly influence work-related satisfaction than overall life satisfaction, we expected a spillover effect from meaningful work to general well-being. The discrepancy between our results and those of Xu may be attributed to two factors. First, our study examined the longitudinal prediction of career wisdom for life satisfaction while controlling for the autoregressive effects of life satisfaction, a more rigorous approach than using personality traits as control variables, as was done in Xu's study. Second, assessing time-lagged predictions of career wisdom for life satisfaction necessitates sufficient variance in life satisfaction over the study interval. Although a 3-month period is not insubstantial, it may not be sufficient to observe meaningful changes in life satisfaction within our sample, particularly considering that the benefits of career wisdom on general well-being may manifest gradually

over a longer term (Staudinger & Glück, 2011). Therefore, further research is needed to explore the long-term impact of career wisdom on overall well-being.

Implications for Theory, Research, and Practice

The present study contributes important evidence to the dual-process theory of career decision making and adaptation (DTC; Xu, 2021, 2023; Xu & Flores, 2023) and further clarifies the role of career wisdom in career development. As proposed by the DTC, ambiguity regarding the right choice is virtually inevitable in most career challenges. Thus, both identifying matching options (Process I) and finding peace with ambiguity (Process II) are essential and must be managed dialectically (Xu, 2021). Building on this foundational principle of the DTC, career wisdom acknowledges that it is acceptable to make decisions based on incomplete information, to trust one's intuitions, and to accept vulnerability. Accordingly, it is conceptualized as a critical psychological resource for navigating uncertainty and for gathering and processing career-related information (Xu, 2024). Although the significance of career wisdom was derived from the DTC's account of uncertainty management, its immediate benefits in handling ambiguous, open-ended career challenges had not been empirically examined until now.

By focusing on the development of work meaningfulness as an example of an open-ended career challenge, the present study is the first to provide direct empirical support for the role of career wisdom in resolving significant career dilemmas that do not have a clear right answer. Interestingly, career wisdom's prediction of workplace well-being in this study occurred largely through its facilitation of a specific open-ended challenge—that is, the search for meaning in work. Together, these findings underscore the value of career wisdom in navigating complex, ambiguous career challenges and support the DTC's proposition that dialectical management of both Processes I and II is vital for effective career decision making and adaptation.

While the present study supports the role of career wisdom in fostering work meaningfulness, finding meaningful work is only one of many career challenges characterized by inherent ambiguity. Inspired by these findings, future research should explore how career wisdom contributes to other open-ended career endeavors, thereby expanding our understanding of its utility in contemporary career development. For example, adapting to a new work environment—particularly when experiencing P–E misfit—is a common and complex challenge because it does not have a singularly correct solution (Van Vianen, 2018). Some individuals may find it beneficial to remain in an ill-fitting environment to gain experience or accumulate resources, while others may opt to transition to a better fitting context to preserve their well-being. Even among those who stay, strategies for improving P–E fit may vary (e.g., through job crafting or self-adjustment). Based on the findings of this study and the DTC's analysis of ambiguity in adaptation (Xu & Flores, 2023), career wisdom likely facilitates such adjustment processes. Therefore, it would be valuable for future research to examine the predictive role of career wisdom in career outcomes through the lens of P–E (mis)fit, using adaptation behaviors and outcomes as potential mediators. A related area worth investigating is the role of career wisdom in coping with workplace trauma, such as experiences of discrimination.

Although research has already supported the links from work meaningfulness to job satisfaction, life satisfaction, and work

engagement (Allan, Batz-Barbarich, et al., 2019; Hirschi, 2012), the present study adds to this literature by establishing career wisdom as a predictor of these relations. Specifically, consistent with previous research on related constructs (e.g., Allan, Owens, & Douglass, 2019), career wisdom as a personal capacity appears to act on outcomes through meaningful work. This finding links career decision-making research and theories arguing that wisdom facilitates solving ambiguous problems (Xu, 2021, 2024), with meaningful work research and theory arguing that key characteristic adaptations facilitate personal narratives that structure the experience of meaningful work (Barrick et al., 2013; Lysova et al., 2019). With this empirical and theoretical linkage, the present study suggests a new possibility for understanding the development of meaningful work: specifically, that handling inevitable ambiguity in career decisions and transitions is likely conducive to finding meaningful work or developing narratives that support its experience.

Moving forward, scholars can integrate career wisdom into existing meaningful work models, teasing apart how job-level (e.g., job design), organizational (e.g., leadership), and societal factors (e.g., access to decent work) predict, mediate, or moderate career wisdom and meaningful work. Future research can also examine career wisdom in concert with other established dispositional and adaptive factors relevant to meaningful work, such as prosocial and intrinsic motivation (Barrick et al., 2013; Lysova et al., 2019).

The findings linking career wisdom to work meaningfulness and workplace well-being offer several practical implications. In line with Xu's (2024) study, practitioners may consider developing wisdom-based interventions as a strategy to enhance job satisfaction and work engagement among employees. Based on the DTC's process model (Xu & Flores, 2023), such interventions should likely emphasize at least three key components: (1) engaging in information collection and solution formulation, (2) recognizing the limitations of purely rational and proactive career strategies, and (3) practicing decision making under uncertainty—specifically using incomplete information, intuition, and tolerating emotional distress. It is crucial to emphasize that practicing career wisdom is not equivalent to making entirely random or impulsive decisions. Rather, it involves adopting a dialectical approach to complex career decision making and adaptation, in which both rational problem solving (i.e., seeking the optimal solution) and ambiguity management (i.e., settling for a good-enough option) play important roles. According to the DTC's process model (Xu & Flores, 2023), although both processes are relevant throughout decision and adaptation, career wisdom becomes particularly valuable when individuals have already identified several viable options and the marginal benefit of continued problem solving significantly decreases.

Translating this conceptualization into the context of meaningful work, practicing career wisdom does not necessarily conflict with conventional meaning-oriented interventions that aim to increase individuals' perceived significance of their work (Allan et al., 2018; Fletcher & Schofield, 2021). Instead, it complements those efforts by creating a psychological space that allows individuals to move away from an overemphasis on socially validated significance. Within this space, individuals may come to recognize that there might be no definitive answer about how to achieve meaningful work or that such meaningfulness may be too complex or distant to discern clearly at a given moment. Indeed, meaningful work is not a constant state—rather, the experience of meaningful work may arise episodically throughout the day or week, depending on personal

factors, the social environment, and the task at hand (Bailey & Madden, 2017). Therefore, with career wisdom, people may also begin to accept that it is natural to feel distress or uncertainty about the lack of meaningfulness. Importantly, they might discover the value of drawing on a personal, intuitive sense of purpose or significance when constructing their experience of meaningful work. These tentative propositions open important directions for future research and call for further validation through targeted intervention studies.

The current findings on the role of career wisdom in facilitating work meaningfulness and well-being also have implications for navigating contextual barriers. Individuals facing marginalization and oppression often encounter a dilemma between making career choices that challenge contextual constraints or conform to them (Duffy et al., 2016; Xu, 2023). As outlined in the prescriptive process model of the DTC (Xu & Flores, 2023), this dilemma does not have a single optimal solution: Prioritizing personal aspirations may overlook socioeconomic and power realities and overemphasize individual responsibility, whereas submitting to external constraints may neglect personal agency and reinforce a passive response to social injustice. Based on the current and prior findings regarding career wisdom, an adaptive strategy likely involves engaging in both processes described by the DTC. Specifically, information gathering and option evaluation can help rule out unviable strategies and exercise personal agency. However, in moving forward, the key is to selectively disregard certain inaccessible or insolvable information and rely on intuition to make an adaptive and meaningful interim choice—one that allows for future revision and adjustment rather than striving to identify a definitive optimal solution. Even when contextual constraints are incorporated into these interim choices, practicing career wisdom can support meaning-making and help individuals integrate necessary compromises into their work justifications, thereby contributing to both workplace and overall well-being. The finding that the relationship between career wisdom and work meaningfulness was invariant across gender, race, and socioeconomic status suggests that this psychological process may serve as a universal adaptive tool that remains effective even when individuals face varying levels of structural privilege or marginalization.

Limitations and Suggestions for Future Research

Several limitations should be considered when interpreting the results and drawing conclusions from this study. First, although the current mediation model focused on well-being as the outcome variable—given its recognized importance in the wisdom literature (Staudinger & Glück, 2011)—the role of career wisdom in predicting other key career outcomes and vocational behaviors remains unclear. For instance, it is still unknown whether career wisdom can promote objective indicators of career success, such as job performance, promotion, or salary. The relationship between career wisdom and long-term career success is particularly compelling. It is plausible that career wisdom exerts a stronger influence on major career decisions, which often involve higher degrees of ambiguity and thus may have a greater impact on long-term career success than on short-term outcomes.

Second, while the study employed a time-lagged design to examine the longitudinal relationships among career wisdom, work meaningfulness, and well-being—thereby addressing several conceptual

and methodological limitations inherent in cross-sectional mediation analyses—it cannot establish causality. Without experimental data, the causal direction of the associations remains tentative. Future research could address this limitation by employing experimental designs that directly manipulate levels of career wisdom. A potential intermediate approach would involve extending the time intervals in longitudinal designs, thereby capturing greater within-person variability in career wisdom, work meaningfulness, and career outcomes and enabling more robust examination of their dynamic interplay.

Third, the study sample comprised a diverse group of workers recruited via a crowdsourcing platform. While this approach enhances accessibility and heterogeneity, it may limit the generalizability of the findings to other populations or professional contexts. For example, some work environments may place little emphasis on meaningfulness or may offer external rewards that compensate for its absence (e.g., in certain business or financial sectors). Conversely, other environments—such as helping professions or religious vocations—may demand a strong sense of purpose or prescribe specific meanings to the work itself. Therefore, it is essential for future research to cross-validate the present findings across various occupational and cultural contexts.

Conclusions

To illuminate the mechanism underlying the relationship between career wisdom and career outcomes—particularly well-being—the present study examined the longitudinal predictions of career wisdom for job satisfaction, life satisfaction, and work engagement, with work meaningfulness as a mediator. The results supported the mediating role of work meaningfulness in the positive associations between career wisdom and subsequent job satisfaction and work engagement. These findings provide evidence for the role of career wisdom in addressing an important and open-ended career challenge: finding meaning in work. In conclusion, this study offers both theoretical and empirical contributions by reinforcing the empirical foundation of the dual-process theory of career decision making and adaptation (DTC; Xu, 2021, 2023; Xu & Flores, 2023) and clarifying how career wisdom may facilitate career development.

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