

WHOLE-PERSON CAREER ASSESSMENT: INTEGRATING FIT USING INTERESTS,
PERSONALITY, VALUES, KNOWLEDGE, AND SKILLS

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ABSTRACT

Career assessments can help people make more successful career and educational decisions. However, most career assessments only measure fit using single individual difference domains that link into a restricted set of occupational variables. This research describes the development and validation of an integrative career assessment, with over 90 links to O*NET occupational variables, that incorporates five individual difference domains: vocational interests, personality, work values, knowledge, and skills. Based on a cross-sectional study and two time-lagged studies, our research indicated that individuals tended to fit best with their current occupations in terms of interests, values, and knowledge, but all five fit domains showed positive relations with career choice. Dominance analyses further found that the five fit domains made unique contributions to predicting subjective career outcomes (career choice satisfaction, job satisfaction, perceived needs-supplies fit, and perceived demands-abilities fit). Interests were generally the strongest predictor of subjective career outcomes, except for perceived demands-abilities fit, which was strongly related to knowledge and skills. Overall, our research suggests that integrative career assessments have improved predictive power for career choice and career outcomes. We discuss how our assessments can be used for different purposes, with different populations, in the current and future labor market.

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Whole-Person Career Assessment: Integrating Fit Using Interests, Personality, Values, Knowledge, and Skills

Career choice represents one of the most important decisions throughout adult life. Entering a well-fitting occupation is related to a variety of important work outcomes, including increased job satisfaction, reduced psychological strain, and enhanced job performance (Kristof-Brown et al., 2005; Oh et al., 2014). Due to ongoing changes in the economy and technological advances, career choice has further evolved to be a lifelong decision. For example, U.S. adults born during the early 1960s held an average of 12 different jobs from age 18 to 52 years (Bureau of Labor Statistics, 2019). Various career assessments have been developed to help individuals explore well-fitting careers and educational paths, such as the Occupation Information Network's (O*NET) Interest Profiler (Rounds, Hoff, & Lewis, 2021) and Career One Stop's Skills Matcher (U.S. Department of Labor Employment and Training Administration, 2019). However, most existing assessments focus on single individual difference domains in a disconnected manner. This means that each assessment only considers a limited portion of available occupational information, restricting career recommendations or predictions based on person-occupation fit. Hence, an integrative career assessment incorporating multiple individual differences can better utilize the wide range of occupational information available on O*NET to offer greater utility and flexibility for career guidance and research purposes.

In the current research, we apply a comprehensive set of career assessments focusing on multiple dimensions of person-occupation fit and assess their predictive power for critical career outcomes. Our assessments consider five individual differences—vocational interests, personality, work values, knowledge, and skills—and link each of these domains to relevant occupational descriptors from the O*NET. We focus on self-reports of the individual difference

domains, which can reliably measure a wide range of variables in a short period of time, supporting their use in applied settings where time and resources are limited. Our connection with O*NET further resulted in 90 links to occupational descriptors facilitating the operationalization of person-occupation fit.

Our research offers three major contributions. First, the present research describes the measure development and validation process with the ultimate goal of informing a broad audience about how to improve career assessments using O*NET. The literature has recognized the need for a more holistic assessment to help people identify which occupations can best satisfy their needs and let them realize their potential (Burrus et al., 2020; McCloy et al., 2020). Our integrative assessment offers the opportunity to assess person-occupation congruence on multiple domains based on information from both person and occupation sides. We provide informative introductions to the measure development process, from creating and refining items, selecting and connecting with O*NET variables, to validating and evaluating measures. This can provide future research with a starting point and guidance to build measures utilizing O*NET information and to improve existing career assessment tools.

Second, our research reveals new knowledge about the extent to which the five fit domains predict people's career choices and subjective career outcomes. We examine the inter-relationships among five domains and the unique contribution of each domain to shaping career choices and helping individuals thrive at work. These investigations can advance our knowledge about the conceptualization and implication of fit. Examining the relative importance of each domain can also provide useful information for applied contexts. For example, recommendations based on the domains with greater contributions to predicting career outcomes may deserve more consideration when individuals show high levels of fit in some domains but low levels of fit in

other domains (e.g., McCloy et al., 2020) or when there is limited time or space for assessing all domains in practice.

Finally, the current study incorporates three independent samples in developing and evaluating the integrative assessment. Specifically, we include a representative sample of U.S. adults via Prolific, recent bachelor's degree graduates, and community college students. The three samples are diverse in terms of ethnicity and socioeconomic status. Including under-examined populations, such as community college students, in the measure development helps ensure that our integrative assessment can satisfy their needs for career assessment tools and guidance (Gregor et al., 2020; Harlow & Bowman, 2016). We collect time-lagged data in the last two samples to further examine the extent to which the career assessments can retain predictive power for career choice and career outcomes after a time interval. Diverse samples and inclusion of time intervals can strengthen the validity evidence, leading to a more convincing evidence basis to help orient job searchers and practitioners toward an integrative assessment tool for career choice and organizational placement.

Person-Occupation Fit: Conceptual Background

Person-environment (P-E) fit captures the match between a person's attributes and their environment (Barrick & Parks-Leduc, 2019). Multiple types of fit have been investigated under the umbrella of P-E fit. For example, the target of fit can vary from an occupation to an organization, to a job, to a work unit, or to an individual. In terms of the fit domain, multiple attributes have been examined, including fit on interests, values, and personality, in a disconnected manner in previous research. People tend to prefer jobs that can both utilize their abilities, aptitudes, and skills and reward their interests and values (Greguras & Diefendorff,

2009; McCloy et al., 2020). To capture a more complete picture, we consider fit in various domains, including interests, personality, work values, occupational knowledge, and skills.

Person-occupation fit is important in influencing individual career paths. Based on the theory of work adjustment (TWA), congruence between individuals and the work environment in terms of interests, values, and abilities contributes to job satisfaction and job performance (Dawis & Lofquist, 1984). In a similar vein, Schneider (1987) proposed the attraction-selection-attrition (ASA) model that individuals tend to be attracted to, selected into, and retained across time in work environments where there are employees with similar attributes. Holland (1997) also argued that congruence was critical in determining satisfaction with the vocation and career achievement. In support of this view, it has been found that interest congruence is positively associated with job performance and job satisfaction (Hoff et al., 2020; Nye et al., 2017). Fit on personality also positively predicts satisfaction with work (Christiansen et al., 2014). However, despite the well-established importance of fit, previous research is constrained in examining fit on a single personal attribute in a disconnected manner.

O*NET, a large database of occupational information, provides opportunities to investigate the person-occupation fit on multiple attributes. Specifically, there is information on over 900 occupations with ratings on over 200 distinct variables in O*NET (Peterson et al., 2001). For each vocation, both worker-oriented and work-oriented occupational data are provided, such as worker knowledge, abilities, and skills, as well as work activities and work contexts. Thus, the rich occupational data can help connect occupational characteristics with the corresponding attributes measured among individuals, which can further enable assessing fit and helping people explore careers that match their unique attributes across multiple domains.

Different approaches have also been used to operationalize person-occupation fit, including subjective fit and objective fit. Specifically, subjective fit is usually directly rated by individuals regarding their perception of fit with the occupation (Kristof-Brown et al., 2005), which can serve as an important indicator of individuals' satisfaction with their career decisions. Objective fit can be assessed by obtaining the characteristics of the person and the environment from separate sources and calculating congruence (Xu & Li, 2020), which can be useful in making career decisions. Our career assessments will draw upon the O*NET database to capture objective person-occupation fit. Specifically, profile correlations operationalize objective fit using the Pearson correlation between the person and occupational variables (Su et al., 2015). Such an approach can capture more comprehensive information and is suitable when multiple domains are involved because it can consider different domains separately instead of including excessive predictors in a regression. Furthermore, profile correlations can focus on pattern congruence in a given domain rather than a complete match, resulting in greater utility in predicting career outcomes. Hence, the current research will rely on profile correlations between personal attributes and occupational descriptors to reflect objective person-occupation fit in different domains and investigate how objective fit can predict subjective fit perceptions and satisfaction.

Content Domains of an Integrative Fit Assessment based on O*NET

This study applies an integrative assessment to capture multiple individual difference domains in understanding the congruence between the person and the occupation. Specifically, five domains are considered, including vocational interests, personality, work values, knowledge, and skills.

Vocational Interests

Vocational interests, referring to trait-like preferences for work activities and work contexts (Rounds & Su, 2014), are widely examined in career counseling and personnel selection. Interests serve important motivational functions in work life. Specifically, interests can influence individuals' choice of career goals and determine efforts and persistence in the pursuit of career goals, rendering it important in understanding career choice and career success (Su, 2020). According to the theory of vocational personalities and work environments (Holland, 1997), the congruence between interests and work environment will contribute to satisfaction with the occupation, career stability, and career success. Consistent with these claims, previous meta-analyses revealed that interest fit was positively related to job satisfaction and job performance (Hoff et al., 2020; Nye et al., 2017).

Vocational interests have been operationalized at different levels in previous research, including general interests and basic interests. Our integrative assessment tool particularly focuses on basic interests, defined as specific, homogeneous units of interest that group together work activities that share similar properties and represent the same abstract object (Su et al., 2019; Campbell et al., 1968). Compared to general interests, basic interests can capture individual preferences at a more fine-grained level but are still broad enough to have generalizable utility and reflect stable individual differences. Also, given the similarity in content and level of specificity, basic interests can be feasibly mapped onto the knowledge requirements of occupations. For example, individuals who are interested in mechanics may better fit the occupation requiring knowledge of machines and tools. Hence, this study connects individual reports and knowledge requirements of the occupation based on the O*NET database to reflect person-occupation fit on basic interests.

Personality

Personality depicts individual differences in patterns of thinking, feeling, and behaviors (McCrae & Costa, 2008). The Five-Factor Model (FFM) serves as a unifying framework for organizing personality into five trait domains, namely neuroticism, extraversion, agreeableness, conscientiousness, and openness (McCrae & Costa, 1997, 2008). Previous empirical efforts primarily focused on the role of personality in personnel selection, revealing the predictive validity of trait domains and the facets on job performance (Hurtz & Donovan, 2000; Judge et al., 2013).

Beyond that, personality is also critical in shaping person-occupation fit. Individuals find it intrinsically rewarding when they have the opportunity to express personality in work behaviors, so they tend to look for a working environment matching their personality (Schneider, 1987; Tett & Burnett, 2003). In essence, person-occupation fit on personality indicates the extent to which an individual's personality matches the general work style required by the occupation. For example, extraversion reflects a tendency to be sociable and assertive (McCrae & Costa, 2008). Individuals may find it easy to express their extraversion in jobs with a strong social orientation, and it can facilitate employees to fulfill the demands of their tasks, such as building connections with other people, so an extrovert may be more satisfied with the choice of being a salesman. Consistent with this view, previous research has found that personality-based fit based on extraversion, conscientiousness, and agreeableness on twelve job tasks can positively predict job satisfaction (Christiansen et al., 2014). Advancing previous research, this study will examine five personality domains and link them to different work styles according to O*NET to explore the role of personality congruence.

Work Values

Work values, referring to trait-like preferences or relative importance that individuals place on different aspects of work characteristics (Dawis & Lofquist, 1984), are another aspect of an individual's fit with the occupation (Judge & Bretz, 1992). Different taxonomies exist to investigate the structure of work values (Leuty & Hanse, 2011). For example, Minnesota Importance Scale (MIQ; Gay et al., 1971) organized work values into six dimensions such as achievement, independence, and recognition. As a subset of general values in the organizational context, work values can convey what is important to people in work life and guide individuals' work-related goals, attitudes, and behaviors (Ros et al., 1999).

Value congruence primarily focuses on the match between the availability of attributes in the occupation and the values emphasized by employees on these attributes (Swaney et al., 2012). Based on the TWA (Dawis & Lofquist, 1984), a working environment that can continue to satisfy employees' needs will contribute to satisfaction and retention. The synergy between the person and the occupation on work values has been viewed as a primary contributor to career choice and career success (Judge & Bretz, 1992). Meta-analytic evidence further suggests that fit on work values between employees and the organization is related to important vocational outcomes, including job satisfaction, organizational commitment, and turnover intentions (Kristof-Brown et al., 2005). However, relatively few empirical studies examined the influence of value congruence between person and vocation, and the existing categorization of work values primarily focused on global aspects of work. Given the importance of work value in determining person-occupation fit, we utilized the descriptor of work activities and work contexts in O*NET, representing important elements supplied by the occupation, to incorporate work values at a more fine-grained level in the integrative assessment.

Knowledge

Job knowledge refers to facts and principles needed for job performance (Schmidt et al., 1986), which has been deemed as an important type of “career capital” impacting employability (Kamoche et al., 2011). Previous research has identified job knowledge as one of the most important determinants of job performance (Campbell et al., 1990; Campbell & Wiernik, 2015). Employees need to know what to do (declarative knowledge) and how to do it (procedural knowledge) in order to adequately fulfill their work responsibilities (McCloy et al., 1994). Insufficient job knowledge may result in extra time and resources spent looking up the information or asking for others’ help and lead to increased errors and problems at work (Hunter, 1986). Hence, job knowledge tests have been frequently used in the personnel section and demonstrated predictive validity on task performance (Schmidt & Hunter, 1998).

As most previous research focuses on objective measures of job knowledge to provide valuable information on career success, employee self-evaluations of knowledge should also deserve greater attention, especially in career decision-making. Compared to job knowledge tests, self-reports reflect individual perceptions of their relative strengths and weakness in various knowledge areas, which may play a substantial role in shaping career decision-making compared to objective measures of knowledge. The congruence between knowledge possessed by individuals and the requirements of the occupation has been incorporated as an important element of person-job fit (Saks & Ashforth, 1997). Specifically, when an individual has the necessary knowledge to perform tasks, they will be more likely to succeed on the job and obtain favorable evaluations. Such advantages may help maintain self-esteem and contribute to increased satisfaction and motivation to retain the job (Cable & DeRue, 2002). Career One Stop’s Skills Matcher is an example of self-report assessments widely used in career exploration,

but the lack of validity evidence may limit its usefulness in research (Burrus et al., 2013; National Research Council, 2010). Advancing previous efforts, our validated assessment tool examines self-evaluations of knowledge in various general domains and investigates the match with occupations' knowledge requirements based on O*NET data in predicting career outcomes.

Skills

Similar to job knowledge, skills are also important in meeting the demands of professional roles, especially during the transition to an information and service economy (Wilson, 2013). The current study broadly defines skills as individual attributes and capacities that can facilitate performance at work, including capabilities to perform various types of tasks and strategies used to acquire and work with relevant knowledge (Burrus et al., 2013; Tippins & Hilton, 2010). Individual differences in work-related capacities and proficiencies may determine the extent to which individuals can adequately fulfill job responsibilities and influence employee performance and satisfaction.

Despite the critical role of occupational skills, much of the available research on skill assessments focus on narrower aspects of skills, such as social skills or technical skills within a particular field (Demaray et al., 1995; Knight et al., 2002; Soto et al., 2021). Previous research regarding fit on work-related skills primarily examined subjective perceptions of the congruence between skills and job requirements. For instance, perceived skill-job matches have been found to be positively associated with employment satisfaction and retention (Allen & Van der Velden, 2001; Ju & Li, 2019). Beyond that, the current study utilizes a self-report assessment of a broader range of work-related skills and connects it with occupational requirements of worker ability and skills based on O*NET to investigate the objective congruence between skills and occupational characteristics.

The Present Research

In the current research, we apply an integrative assessment to examine person-occupation fit in different domains and investigate its influence on career outcomes. Our use of an integrative tool can more sufficiently utilize occupational information from O*NET and better capture person-occupation fit. We structure our empirical investigation to address two central questions: 1) how strongly each individual difference domain predicts career choice and 2) how well each fit domain determines subjective career outcomes.

The first aim of the current research is to assess the extent to which the characteristics of participants' current occupations are consistent with individual differences. Based on the ASA model, individuals will be more likely to be attracted to and selected into the occupations, where they perceive fit with their personal characteristics (Schneider, 1987). As mentioned in the previous section, our assessment incorporates individual differences in five critical and distinct aspects, which may guide individuals to sort themselves into occupations with compatible attributes. Thus, in this study, we expect there will be congruence between the characteristics of participants' current occupation and their personal characteristics. Such investigation can both reflect the role of personal characteristics in shaping career choice and lay the groundwork for subsequent analyses of the five fit domains.

Research Question 1. To what extent do the characteristics of individuals' current occupations converge with corresponding individual differences (basic interests, personality, work values, knowledge, and skills)?

To better understand what is being measured by each fit domain, we next consider the relationships among the five fit domains. On the one hand, the five domains represent distinct aspects of individual differences and complement each other to offer a full mapping of a person's

characteristics. On the other hand, there are common characteristics captured by different domains as well as interplays across domains, leading to inter-domain associations. Hence, examining whether the five fit domains can represent relevant but still unique aspects of personal attributes is critical to developing an integrative assessment. For instance, both knowledge and skills capture aptitudes necessary for individuals to effectively handle job demands, so they should be associated with each other. However, knowledge may focus on principles related to specific tasks, while skills, especially social, emotional, and behavioral skills, also capture non-technical capacities of maintaining relationships, regulating emotions, and managing goal-related behaviors in response to situational demands (Soto et al., 2021). Hence, there may be a positive association between knowledge fit and skill fit.

As another example, one important function of vocational interests is to direct individuals' time and effort at work, which may facilitate acquiring related knowledge and skills (Su et al., 2019; Van Iddekinge et al., 2011). Individuals with a strong interest in physical science may be more willing to take physics classes and do relevant readings, thus leading to the accumulation of physics knowledge and scientific skills. Advantages in knowledge and skills may also reinforce the development of interests (Harackiewicz et al., 2008). In this manner, fit on vocational interests may be positively related to fit on knowledge and skills. Nevertheless, interests may also be shaped by other environmental factors such as societal norms (Betz, 2007; Fassinger, 2005) and should still represent a domain distinct from aptitude variables. Therefore, interests fit may be moderately related to knowledge or skills fit. Hence, we propose the following research question:

Research Question 2. What are the interrelations among the five fit domains (i.e., fit based on basic interests, personality, work values, knowledge, and skills)?

The next aim of the current study is to assess the value of multiple fit domains in predicting subjective career outcomes after an individual enters an occupation. Our previous discussion suggests that person-occupation similarity in the five domains should contribute to more favorable subjective evaluations of career choices and greater fit perceptions. However, as individuals can show both fit and misfit in different domains, it is critical to explore the relative contributions of each domain to subjective career outcomes. In practice, when time and resources are constrained for a long survey of all five domains, useful career recommendations can still be generated by including the domains with greater predictive validity. We first evaluate the extent to which the five domains are associated with career choice satisfaction and job satisfaction, which capture people's holistic evaluations of their careers and current job. Because the five fit domains capture distinct individual differences, they are expected to play unique roles in influencing satisfaction. Furthermore, their relative importance may vary because individuals can emphasize different aspects of fit when evaluating their satisfaction. Nonetheless, prior research and theory did not provide sufficient guidance with regard to what matters most when predicting holistic ratings of satisfaction. Thus, we examine the unique contributions of each fit domain in predicting career choice satisfaction and job satisfaction in an exploratory manner.

Research Question 3. Which fit domain is the strongest predictor of (3a) career choice satisfaction and (3b) job satisfaction?

We also examine two narrower types of subjective fit perceptions: perceived needs-supplies fit and perceived demands-abilities fit (Cable & DeRue, 2002). The P-E fit literature considers fit as both a) the match between employees' needs and preferences and what the environment offers (needs-supplies fit) , and b) the congruence between individual knowledge, skills, and abilities and what is required by the environment (demands-abilities fit) (Edwards,

1991; Kristof-Brown et al., 2005). We expect that different domains of objective person-occupation fit may have differential relationships with the two subjective perceptions considering their unique focus.

Needs-supplies fit refers to the match with rewards provided by a particular job, such as pay, promotion opportunities, interesting work, and favorable work conditions (Cable & DeRue, 2002). In particular, we expect vocational interests and values to play an important role in predicting needs-supplies fit. Interests focus on individual preferences for what people like to do (Rounds & Su, 2014). Individuals whose interests match their occupation tend to perceive that the work environment can satisfy their needs for certain types of work activities, so interest fit should be critical in evaluating needs-supplies fit (Wiegand et al., 2021). For example, if an individual is interested in mechanical work, a repairing job can fulfill their preferences for engaging in mechanics-relevant activities, resulting in greater needs-supplies fit. Work values concern what individuals think is important in a job, such as opportunities to help others and autonomy to determine the work schedule (Dawis & Lofquist, 1984). In a similar vein to interests, individuals tend to consider the extent to which what they find important can be provided by the work environment to determine the needs-supplies fit (Edwards & Shipp, 2007). For example, a job where employees can make decisions on their own may satisfy the need of individuals who value autonomy at work, leading to perceived needs-supplies fit. Thus, we propose:

Hypothesis 1. Interests (H1a) and values (H1b) are relatively important predictors of perceived needs-supplies fit.

Demands-abilities fit, on the other hand, reflects the congruence between the job requirements and the person's ability level (Cable & DeRue, 2002). The work environment may

require employees to fulfill certain responsibilities defined in their job, so individuals need to possess relevant knowledge and skills in order to effectively handle these job demands and meet the work environment's expectations (Edwards, 2008). Thus, congruence based on knowledge and skills should be especially important in determining demands-abilities fit. For example, adequate knowledge of customer service and speaking skills may be critical for customer service representatives to effectively meet their performance requirements, contributing to greater perceptions of demands-abilities fit. Thus, we propose:

Hypothesis 2. Knowledge (H2a) and skills (H2b) are relatively important predictors of perceived demands-abilities fit.

Overview of the Three Studies

In the current research, we applied an integrative assessment tool and investigated the research questions and hypotheses in three studies. Study 1 used cross-sectional data from a representative sample of U.S. adults via Prolific to evaluate and refine the measures and examine the extent to which individual differences can predict career choice and subjective career outcomes at the same time point. Studies 2 and 3 advanced this knowledge by testing the predictive power of the assessments for future career choice and subjective outcomes in two samples representative of typical career assessment users. Specifically, Study 2 included recent bachelor's degree graduates and assessed participants' current occupation and career outcomes four months after collecting the individual difference variables. Study 3 included community college students and used an 8-month interval.

Study 1

Participants and Procedures

Participants were recruited on Prolific, an online data collection platform for researchers

to collect high-quality data for scientific research (Palan & Schitter, 2018). Our sample includes 790 participants representative of the U.S. population in terms of age, ethnicity, and gender. After removing cases in which participants failed quality control questions, the final sample comprised 768 participants. Of these, 383 participants were female (49.9%), and the average age was 45.80 years old ($SD = 16.06$). Table A1 in Appendix C reports key demographic information and characteristics of the participants in Study 1.

Measures

Individual Difference Measures

We developed an integrative assessment to measure five individual difference domains. A brief introduction of the measures is provided below. More details on measure development and a full list of items can be found in the Appendices.

Vocational Interests. Vocational interests were assessed using the O*NET Basic Interest Inventory (BINI; Chu et al., manuscript in preparation), an assessment developed based on pre-existing basic interest scales (Liao et al., 2008; Su et al., 2019) and public domain interest measures (Armstrong et al., 2008). Three item scales were used to capture each of the 20 central basic interest scales that can be linked to O*NET occupation variables.¹ Participants indicated the extent to which they enjoyed doing each type of work on a five-point scale, ranging from 1 (strongly dislike) to 5 (strongly like). Sample items include “Repair car engines (Mechanics),” “Study the formation and evolution of galaxies (Physical Science),” and “Create a piece of artistic and functional furniture (Design).”

¹ We also tested the predictive validity of vocational interests aggregating 20 basic interest scales to six RIASEC dimensions. We reported the results with 20 basic interest facets because of the greater predictive power for career outcomes.

Personality. Personality was measured using 31 items adapted from the Big Five Inventory-2 Short Form (BFI-2-S; Soto & John, 2017) and the HEXACO Personality Inventory (Ashton & Lee, 2009). Personality was assessed at the facet level for more information to accurately calculate profile correlations. Sample items include “Is outgoing, sociable (Extraversion - Sociability),” “Is compassionate, has a soft heart (Agreeableness - Compassion),” and “Keeps things neat and tidy (Conscientiousness - Organization).”

Work Values. Work values were measured using the Occupational Values Questionnaire (OVQ; Heimpel et al., manuscript in preparation), an assessment developed based on previous work value frameworks (e.g., Abessolo et al., 2021; Consiglio et al., 2017) and occupational information from O*NET. Participants were presented with 15 items and responded to the extent to which they were important in a career on a five-point scale (1 = not important, 5 = most important). Prior factor analyses revealed a six-factor solution with an acceptable fit, including the following scales: altruism, management, physical, outdoors, salary, and prestige.

Knowledge. Knowledge was measured using 27 items from the Occupational Skills and Knowledge Inventory (OSKI; Thomas et al., manuscript in preparation), an assessment developed based on occupational information from O*NET. Participants were instructed to report their level of knowledge relative to other people on a five-point scale (1 = beginner, 2 = basic, 3 = skilled, 4 = advanced, 5 = expert.). Sample items include “Biology: plant, animal, and cell functions,” “Physics: physical principles, laws, and their applications,” and “Construction: building materials, methods, and tools.”

Skills. Skills were measured using 19 items from the Occupational Skills and Knowledge Inventory (OSKI; Thomas et al., manuscript in preparation). Participants were asked to report their level of skills relative to other people on a five-point scale (1 = beginner, 2 = basic, 3 =

skilled, 4 = advanced, 5 = expert.). Sample items include “Customer service: handling customer needs and resolving service problems,” “Speaking: talking to others to convey information effectively,” and “Managing others: leading other people and business planning.”

Current and Ideal Occupations

Participants reported their current jobs, which were coded into O*NET occupations using the Standard Occupation Classification (SOC). Job titles were recoded independently by two research assistants, and all disagreements were resolved through discussion. Various occupational descriptors from O*NET, including worker requirements and work contexts, were extracted and associated with the corresponding personal variables. We described how personal attributes are matched to occupational variables in more detail in the Appendices.

Outcome Measures

Career Choice Satisfaction ($\alpha = .92$). Five items adapted from the Academic Major Satisfaction Scale by Nauta (2007) were used to measure individual satisfaction with the current career. A sample item is “Overall, I am happy with the career I have chosen.”

Job Satisfaction ($\alpha = .90$). Job satisfaction was measured with five items from Brayfield and Rothe’s (1951) Revised Job Satisfaction Blank. A sample item is “I am very satisfied with my present job.”

Fit Perceptions. Six items from Cable and DeRue (2002) were used to assess two different types of fit perceptions: perceived needs-supplies fit and perceived demands-abilities fit. A sample item for needs-supplies fit ($\alpha = .92$) is “The job that I currently hold gives me just about everything that I want from a job.” A sample item for demands-abilities fit ($\alpha = .93$) is “My abilities and training are a good fit with the requirements of my job.”

Analytic Strategy

Prior to examining the research questions and hypotheses, we first evaluated the measures of individual differences based on the data collected in Study 1 in a series of three phases, including item generation, item content review by subject matter experts, and item reduction and selection (Hinkin, 1998). Appendix A depicts the detailed process, and Appendix B presents the final set of items used in Studies 2 and 3. In Study 1, our analysis investigated the person-occupation fit in five domains and investigated the predictive validity of multiple fit domains on career outcomes. Profile correlations were used to measure fit due to their superiority over other fit methods in predicting career outcomes (Xu & Li, 2020). Higher profile correlation scores indicate a greater congruence between the individual and their current or ideal occupation. We conducted Fisher's z-transformation to transfer the distribution of profile correlations to a normal distribution.

For Research Questions 1 and 2, we examined the mean level of profile correlations and bivariate correlations among them to explore the inter-relationships underlying the five fit domains. For Research Question 3 and Hypothesis 1 and 2, we operationalized the relative importance of fit domains in predicting career outcomes by both bivariate correlations and dominance analyses. First, we calculated the bivariate correlation between the fit index and each career outcome and expected the relatively important fit domains had stronger correlations with career outcomes. Second, we conducted a dominance analysis to compare the variance each fit domain accounts for in each outcome when combined with other fit domains. Dominance analysis is currently the most widely accepted relative importance analysis technique (Braun et al., 2019; Cooper-Thomas et al., 2014). We followed the procedure outlined by Braun et al. (2019) to estimate the unique contribution of fit on vocational interests, personality, work values,

knowledge, and skills. Specifically, we used Braun et al.'s (2019) R tool (domWeightTool.R) to compute the dominance weights for uncorrected and corrected correlations (i.e., correction for criterion reliability) and followed their recommendations for reporting and interpreting analyses.

Results

Research Question 1 asked the extent to which the five individual difference domains were consistent with the characteristics of their current occupation. Table 1 presents the descriptive statistics of fit indices. In general, there was substantial congruence between the characteristics of participants' current occupation and their basic interests ($M = .17$, $SD = .32$), work values ($M = .25$, $SD = .72$), knowledge ($M = .31$, $SD = .33$), and skills ($M = .21$, $SD = .35$). In contrast, the congruence between participants' personality and their occupation's personality demands was relatively low ($M = .08$, $SD = .32$).

Research Question 2 concerned the inter-relationships among the five fit domains. As shown in Table 1, the inter-correlations ranged from .05 to .40. Specifically, fit on knowledge and skills were most strongly correlated ($r = .40$). Fit on basic interests was also closely associated with fit on knowledge ($r = .36$) and skills ($r = .25$). Compared to other pairs, there were relatively weak relationships between fit on personality and fit on basic interests ($r = .09$), work values ($r = .10$), knowledge ($r = .05$), and skills ($r = .05$).

Next, we investigated the extent to which these fit domains predicted subjective career outcomes based on both bivariate correlations and dominance analyses. Research Question 3 explored the relative contributions of the five fit domains to career choice satisfaction and job satisfaction. As shown in Table 1, fit on basic interests was the strongest predictor of both career choice satisfaction and job satisfaction ($r = .29$ and $.26$, respectively). Fit on work values and knowledge was also closely related to career choice satisfaction ($r = .21$ and $.20$, respectively)

and job satisfaction ($r = .17$ and $.21$, respectively). Fit on skills and personality were relatively weak predictors. Table 2 and Figure 1 present the results of the dominance analysis, which revealed similar patterns as shown by bivariate correlations. Basic interest fit had the strongest relative weight for both career outcomes (corrected weight = $.07$ for career choice satisfaction and $.05$ for job satisfaction, respectively), followed by fit on work values (corrected weight = $.03$ for career choice satisfaction and $.02$ for job satisfaction, respectively) and fit on knowledge (corrected weight = $.02$ for career choice satisfaction and $.03$ for job satisfaction, respectively).

Hypothesis 1 proposed that fit on basic interests and values were relatively important predictors of perceived needs-supplies fit. As shown in Table 1, fit on basic interests was most closely correlated with needs-supplies fit ($r = .30$), followed by fit on work values ($r = .17$) and knowledge ($r = .16$). Dominance analysis also showed similar results that fit on basic interests had the strongest relative weight in predicting needs-supplies fit (corrected weight = $.07$). Fit on work values (corrected weight = $.02$) and knowledge ranked second (corrected weight = $.02$). These findings provided partial support for Hypothesis 1.

Hypothesis 2 predicted that knowledge and skills were relatively important predictors of perceived demands-abilities fit. As shown in Table 1, fit on knowledge and fit on skills were closely related to demands-abilities fit ($r = .21$ and $.14$, respectively); however, basic interests were most strongly correlated with demands-abilities fit ($r = .22$). As indicated in Table 2 and Figure 1, the dominance analysis also showed that knowledge (corrected weight = $.03$) and basic interests (corrected weight = $.03$) had strong relative weights in predicting perceived demands-abilities fit. These findings provided partial support for Hypothesis 2.

Study 1 Discussion

In Study 1, we found there was substantial congruence between personal attributes and occupational characteristics on basic interests, work values, knowledge, and skills, suggesting that four of the five individual difference domains strongly predicted career choice. Further, these fit domains play important roles in shaping subjective career outcomes. Specifically, fit on basic interests was the strongest predictor of all four subjective career outcomes. Value fit was an important predictor of needs-supplies fit, career choice satisfaction, and job satisfaction. Knowledge was important in predicting demands-abilities fit, career choice satisfaction, and job satisfaction. Our findings of the relative contributions of different fit domains to each career outcome highlight the need to consider a more comprehensive career assessment in making a career choice. However, the data in Study 1 were cross-sectional in nature and were collected from participants of a wide range of age groups via an online platform. It would strengthen the validity evidence to assess the predictive power of the measures for future career outcomes. Also, the generalizability of our findings can be boosted by including participants who are typical career assessment users. Hence, in Studies 2 and 3, we recruited recent bachelor's degree graduates and community college graduates and collected time-lagged data to better answer the research questions.

Studies 2 and 3

Participants and Procedures

Study 2 Participants. Recent bachelor's degree graduates from three U.S. universities were invited to participate in the study via email. At Time 1, 919 participants responded to the survey at Time 1. After removing cases in which participants failed quality control questions, the final sample comprised 816 participants. Four months later, participants who responded at Time

1 were contacted again to accomplish a follow-up survey. At time 2, 397 participants provided valid responses (response rate: 48.7%). Of these, 290 participants were female (73.0%), and the average age was 22.56 years old ($SD = 2.56$).

Study 3 Participants. Community college graduates were contacted via email for participation in the study. At Time 1, 584 participants responded to the survey at Time 1, and 560 participants were retained in the final sample after quality checks. Eight months later, participants who responded at Time 1 were contacted again to accomplish a follow-up survey. 277 participants provided valid responses at Time 2 (response rate: 49.5%). Of these, 219 participants were female (79.1%), and the average age was 24.65 years old ($SD = 7.64$). Table A2 in Appendix C reports key demographic information and characteristics of both samples in Studies 2 and 3.

Measures and Analytic Strategy

At Time 1, vocational interests, personality, work values, knowledge, and skills were assessed with the final set of measures in Appendix B. At Time 2, participants reported their current occupations, which were then coded into O*NET occupations using the same procedure as Study 1. Career choice satisfaction (Study 2: $\alpha = .90$; Study 3: $\alpha = .90$), job satisfaction (Study 2: $\alpha = .89$; Study 3: $\alpha = .86$), needs-supplies fit (Study 2: $\alpha = .89$; Study 3: $\alpha = .90$), and demands-abilities fit (Study 2: $\alpha = .85$; Study 3: $\alpha = .86$), were also measured at Time 2 with the same scales as in Study 1. In general, we conducted the same analyses as in Study 1. The primary difference was that we calculated profile correlations based on individual differences reported at Time 1 and the characteristics of current occupations reported 4 months (Study 2) and 8 months (Study 3) from Time 1. Career outcomes were also collected at the second wave.

Results

Table 3 presents the descriptive statistics of fit indices in Studies 2 and 3. For convergence with current occupations (Research Question 1), there was substantial congruence between the characteristics of participants' occupation at Time 2 and their basic interests (Study 2: $M = .14$, $SD = .28$; Study 3 $M = .19$, $SD = .33$), work values (Study 2: $M = .19$, $SD = .67$; Study 3: $M = .16$, $SD = .63$), and knowledge (Study 2: $M = .27$, $SD = .34$; Study 3: $M = .17$, $SD = .31$) assessed at Time 1. Recent bachelor's degree graduates in Study 2 tended to enter the occupation consistent with their skills ($M = .15$, $SD = .34$), but not community college graduates in Study 3 ($M = .07$, $SD = .32$). In contrast, the congruence between personality and the current occupation was low in both samples (Study 2: $M = .02$, $SD = .31$; Study 3: $M = .06$, $SD = .36$).

In terms of the inter-relationships among the five fit domains (Research Question 2), as shown in Table 3, the inter-correlations ranged from .03 to .38 in Study 2 and from .07 to .44 in Study 3. Specifically, knowledge and skills were most strongly related in both studies (Study 2: $r = .38$; Study 3: $r = .44$). Knowledge was also closely associated with basic interests (Study 2: $r = .28$; Study 3: $r = .31$) and work values in Study 2 ($r = .22$) but not in Study 3 ($r = .07$). Compared to other pairs, there was a relatively weak relationship between work values and personality (Study 2: $r = .03$; Study 3: $r = .09$), partly due to the limited conceptual overlap.

We next examined the contribution of each fit domain to holistic career outcomes (Research Question 3). As for career choice satisfaction and job satisfaction, fit on basic interests was the strongest predictor of both career outcomes (Study 2: $r = .28$ for career choice satisfaction and $r = .21$ for job satisfaction; Study 3: $r = .31$ for career choice satisfaction and $r = .30$ for job satisfaction, respectively). Fit on values was strongly related to both outcomes in Study 2 ($r = .14$ for career choice satisfaction and $r = .14$ for job satisfaction), while in Study 3

fit on knowledge was strongly related to both outcomes 3 ($r = .17$ for career choice satisfaction and $r = .18$ for job satisfaction). Tables 4 and 5 and Figures 2 and 3 present the results of the dominance analysis with similar patterns. In both studies, basic interest fit had the strongest relative weights for career choice satisfaction (Study 2: corrected weight = .08; Study 3: corrected weight = .09, respectively) and job satisfaction (Study 2: corrected weight = .05; Study 3: corrected weight = .09, respectively). In Study 2, fit on values ranked second for career choice satisfaction (corrected weight = .02) and job satisfaction (corrected weight = .02). In Study 3, fit on knowledge and skills ranked second for career choice satisfaction (corrected weight = .02 for knowledge fit and corrected weight = .02 for skill fit) and job satisfaction (corrected weight = .02 for knowledge fit and corrected weight = .02 for skill fit).

Finally, we investigated the predictive power for two narrower types of fit perceptions. Hypothesis 1 proposed that basic interest fit and value fit were relatively important predictors of perceived needs-supplies fit. As shown in Table 3, fit on basic interests was closely related to needs-supplies fit (Study 2: $r = .21$; Study 3: $r = .29$, respectively). However, fit on work values was not closely related to needs-supplies fit (Study 2: $r = -.01$; Study 3: $r = .05$, respectively). Also, Tables 4 and 5 indicate that fit on basic interests (Study 2: corrected weight = .05; Study 3: corrected weight = .07, respectively) but not work values (Study 2: corrected weight = .01; Study 3: corrected weight = .01, respectively) has a strong relative weight in predicting needs-supplies fit, partially supporting Hypothesis 1. Hypothesis 2 proposed that knowledge fit and skill fit were relatively important predictors of perceived demands-abilities fit. As shown in Table 3, in Study 2, fit on knowledge was closely related to demands-abilities fit ($r = .19$), but fit on skills was not ($r = .05$). In Study 3, both knowledge fit and skill fit were closely associated with demands-abilities fit ($r = .18$ and $.29$, respectively). As indicated in Tables 4 and 5, the dominance analysis

showed that fit on knowledge had a stronger relative weight in predicting demands-abilities fit in Study 2 (corrected weight = .04) compared to fit on skills (corrected weight = .01). In contrast, fit on skills had a strong relative weight in Study 3 (corrected weight = .08) compared to fit on knowledge (corrected weight = .03). These findings provide partial support for Hypothesis 2.

Studies 2 and 3 Discussion

Our findings in Studies 2 and 3 provided a systematic replication in U.S. recent bachelor's degree graduates and community college graduates using time-lagged data to supplement the findings from the Prolific sample. We found a similar pattern of person-occupation congruence across the five domains as in Study 1. Individuals were likely to choose an occupation consistent with their basic interests, work values, and knowledge. Also, we found similar inter-relationships underlying five fit domains with fit on knowledge and skills most closely related. Further, our findings replicated the importance of basic interest fit in predicting career choice satisfaction, job satisfaction, and needs-supplies fit. Fit on knowledge (Study 2) or skills (Study 3) was found to be relatively important in determining demands-abilities fit. Our findings further confirmed the need to consider multiple individual difference domains in understanding career choice and subjective career outcomes.

General Discussion

Although there have been various tools assessing single individual differences for career guidance, an integrative assessment of multiple domains can incorporate a more comprehensive mapping of personal attributes relevant to making successful career choices (Burrus et al., 2019; McCloy et al., 2020). In the current research, we developed assessments of five individual differences. We conducted one cross-sectional study and two longitudinal studies and investigated the predictive power of the assessments for career choice and subjective career

evaluations in three independent samples diverse in terms of ethnicity and socioeconomic status. Our results revealed three major findings.

First, the results indicated substantial fit between a person and their current occupation in terms of basic interests, values, knowledge, and skills. Despite the dominant role of vocational interests in career decision-making (Putka & McCloy, 2011), our findings suggested that multiple individual difference domains jointly shaped career choices and thus needed consideration in offering career guidance. Hence, the integrative assessment based on O*NET should receive greater attention as it can utilize a broad range of relevant occupational variables and capture a more complete picture of person-occupation fit to better help individuals identify which occupations to consider and explore. This was further consistent with the recent calls for adopting a holistic perspective in developing career assessments (Burrus et al., 2019; McCloy et al., 2020).

Second, the results indicated that different fit domains had unique contributions in predicting subjective career outcomes, including both general evaluations and specific types of fit perceptions. Among the five domains, basic interest fit was usually the strongest predictor of career choice satisfaction, job satisfaction, and needs-supplies fit in three studies. Knowledge fit and skills fit were especially important in predicting demand-abilities fit. Our findings extended the fit research by linking different domains of objective person-occupation fit with different types of fit perceptions and provided insights into the structural relationships and distinct focuses underlying different domains. Basic interests and values primarily concern the needs and desires of a person, while knowledge and skills focus more on individuals' aptitudes and capacities (Wiegand et al., 2021). Hence, integrative assessments of multiple domains are critical in

incorporating these different conceptual focuses and offering improved prediction of career outcomes.

Finally, we applied our integrative assessments to three different samples, and most of our findings were supported across the studies. Study 1 includes a representative sample of U.S. adults. Studies 2 and 3 include two samples of recent graduates, including bachelor's degree graduates and community college graduates. The multi-sample research enhanced the confidence for generalizing our findings to people who are in the critical transition period and frequently use career assessment tools, which should be important target populations in career counseling.

However, we still need to note a few unexpected or inconsistent findings. As for career choice, person-occupation fit on personality was relatively low. This finding was cross-validated in all three studies, suggesting that individuals may fit relatively poorly with their current occupation in terms of personality. Nevertheless, we need to note that personality was linked to work style variables in O*NET, and the quality of incumbent ratings for which may be questionable due to the low specificity and low observability (Dierdorff & Morgeson, 2009).

Inconsistent findings between the sample of community college students and the other two samples were also worth noting. For example, the congruence between individuals' reported skills and the occupational requirement for skills was relatively low in the community college sample (Study 3) but was substantial in the other studies. This finding may imply an existing misfit between community college graduates' skills and occupational requirements, signaling a potential skill gap (Marshall & Craig, 2019). Furthermore, knowledge fit was a relatively important predictor of demands-abilities fit in the Prolific sample and recent bachelor's degree graduates, while skill fit was relatively important in the community college sample. Again, this may be partly due to the sample characteristics. Specifically, individuals may enter community

college to receive practical, vocational training for jobs particularly emphasizing specialized skills and certifications, such as nurses and technicians (Community College Research Center, 2022). The findings of a relatively low skill fit and its increased importance deserve greater attention when combined together. Community college graduates may have a hard time obtaining jobs that fit their skills despite its importance in predicting subjective career outcomes. Community colleges should be informed of their role in providing training in specialized skills required for the high-demand jobs of today and contributing to addressing skill gaps in the current labor market (Sublett & Tovar, 2021).

Practical Implications

The current research has several applications for career guidance and organizations. As a whole, our findings revealed that an integrative perspective to fit assessment could produce added benefits to career decision-making. As such, individuals, employees, and career guidance practitioners should take into account multiple individual difference domains when implementing career assessments or offering recommendations to clients. Incorporating integrative assessments can not only provide individuals with more accurate guidance but also help with lingering concerns about the skill gap and labor shortage (Giffi et al., 2018; Marshall & Craig, 2019). For instance, research has shown substantial gender differences in interest fit scores but comparable aptitude levels across gender (McCloy et al., 2020), both of which were found to be important in determining career fit in the current research. Thus, a more holistic view of personal attributes may lead to improved recommendations for occupations where individuals can fulfill their needs and perform well and help with human capital risk in the current labor market.

Our investigations of the relative contributions of each domain to different career outcomes may lead to improved career services and help satisfy clients' needs under various circumstances. For example, as basic interests and knowledge or skills are relatively important predictors of career outcomes, in situations with limited time and resources, practitioners can primarily focus on vocational interests and aptitude assessments to give recommendations. Furthermore, as each domain has differential predictive power in different types of outcomes, consultants can also select specific domains to be included in the assessment based on the career outcome of greatest interest. For instance, if the client cares about entering an occupation where they are able to accomplish the job demands, an assessment of knowledge and skills may better serve the purpose.

In addition to implications for individuals' career decision-making and career counseling, an integrative assessment can also benefit organizations. Organizations can base on the results of integrative assessments to initiate internal placement plans to better utilize and retain human capital with reduced costs (Bidwell, 2011). For example, management can use the assessment to diagnose the current fit status within the organization, figure out where the misfit occurs, and place employees in a better-fitting position to fuel the workforce.

Limitations and Future Directions

Several limitations should be noted in the current research and require future research. First, in terms of measure development, we used self-reports of knowledge and skills in the current assessment. On the one hand, the use of self-report enables the assessment of many skills and knowledge areas in a short time span, focusing on individuals' self-perceptions of their relative strengths and weaknesses. However, there may also be bias in the self-evaluation of knowledge and skills (Donaldson & Grant-Vallone, 2002). For example, individuals may try to

present themselves in socially desirable manners, and there may be leniency bias in self-evaluation (Borman, 1991). Hence, future research can provide more validity evidence for the assessments of knowledge and skills by examining their relationships with objective measures of knowledge and skills.

Second, we drew upon the O*NET database as a source of occupational information, but there may still be issues with the use of O*NET variables. The O*NET database is based on occupations. Thus, we need to recode participants' job titles into a broader occupation to connect to occupational descriptors and assess objective fit, which may lead to information loss. Also, occupational information on O*NET is obtained from subject matter experts and job incumbents who may not have sufficient knowledge or proper skills to accomplish accurate ratings. Thus, our results may be impacted by the quality of occupational descriptors on O*NET. For instance, as indicated above, the relatively low personality fit index may be partly due to its matching with the work style variables, whose rating quality may be questionable (Dierdorff & Morgeson, 2009). Future research can bring in other relevant occupational variables or databases to improve the person-occupation links.

Third, future research can strengthen our findings using a more refined coverage of predictors. Our research compares the relative contribution of each individual difference domain, but within each fit domain, there are still various facets that may differ in relative importance. Future studies delving into the relative contribution of specific facets can illuminate which specific facets are more important to be included in a condensed assessment. Further, research indicates that over-fitting and under-fitting have different implications for career outcomes (e.g., Erdogan & Bauer, 2021). Because of our broad focus on multiple individual difference domains—with over 90 fit links—it was beyond the scope of our study to evaluate the symmetry

of fit in our predictors. Nonetheless, future research can apply polynomial regression in a single domain of our assessments to study the differential impact of over-fitting and under-fitting. There may also be other individual differences deserving attention. For instance, future research can consider how cultural values or goal orientation may influence the match with the level of competition in a certain occupation and how such fit predicts career choices and outcomes (Brown, 2002; Jaskiewicz et al., 2016), leading to an even more complete picture of personal attributes.

Fourth, the relative importance of different fit domains may depend on other boundary conditions. For example, individuals may seek different things from their job. Some individuals may view their job as a way to support their family (Zhang et al., 2020) or answer occupational calling (Dik & Shimizu, 2019), so they may care more about the extent to which the job can fulfill their needs (e.g., fit on values). Meanwhile, others may identify their job as an opportunity to fulfill their potential at work (Ryan & Deci, 2000), so they may focus more on the extent to which the job fits their interests or capacities (e.g., fit on interests, knowledge, and skills). Furthermore, as both personal attributes and occupational characteristics may change over time, future research can examine the extent to which the stability of each fit domain may impact its relative importance in predicting subsequent career outcomes.

Conclusion

The purpose of the current research is to develop and test the value of an integrative assessment in predicting career choice and subjective career outcomes. Our results across three studies showed that individuals tended to enter occupations fit with their basic interests, work values, knowledge, and skills. Furthermore, basic interest fit was the strongest predictor of career choice satisfaction, job satisfaction, and perceived needs-supplies fit, whereas knowledge or skill

fit was especially important in predicting perceived demands-abilities fit. Overall, our research highlights the importance of multiple individual difference domains in shaping career choice and subjective career success. Students, employees, job seekers, and organizations can benefit by using integrative fit assessments when faced with important career and job placement decisions.

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Table 1*Study 1: Descriptive Statistics of Person-Occupation Fit, Inter-relationships, and Correlations with Career Outcomes*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1 Basic interests fit	0.17	0.32									
2 Personality fit	0.08	0.32	0.09*								
3 Value fit	0.25	0.72	0.16***	0.10*							
4 Knowledge fit	0.31	0.33	0.36***	0.05	0.21***						
5 Skill fit	0.21	0.35	0.25***	0.05	0.19***	0.40***					
6 Career choice satisfaction	3.61	1.16	0.29***	0.13***	0.21***	0.20***	0.11**				
7 Job satisfaction	3.62	1.03	0.26***	0.13***	0.17***	0.21***	0.11**	0.78***			
8 Needs-supplies fit	3.45	1.14	0.30***	0.12***	0.17***	0.16***	0.08	0.72***	0.78***		
9 Demands-abilities fit	3.85	1.10	0.22***	0.13***	0.16***	0.21***	0.14***	0.62***	0.67***	0.72***	

Note. *N* ranges from 567 to 768 in the Prolific sample. *M* = Mean; *SD* = Standard deviation.

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

Table 2*Study 1 Results of Dominance Analyses in the Prolific Sample*

	Uncorrected		Corrected	
	<i>Dominance Weight (SD)</i>	<i>Rank (SD)</i>	<i>Dominance Weight (SD)</i>	<i>Rank (SD)</i>
Career choice satisfaction				
Basic interests fit	.06 (.02)	1.08 (.27)	.07 (.02)	1.11 (.35)
Personality fit	.01 (.01)	3.98 (.85)	.01 (.01)	4.32 (1.10)
Value fit	.03 (.01)	2.27 (.68)	.03 (.01)	2.33 (.80)
Knowledge fit	.02 (.01)	2.96 (.72)	.02 (.01)	3.25 (1.02)
Skill fit	.01 (.003)	4.92 (.58)	.01 (.004)	5.26 (.81)
<i>R</i> ²	.14 (.02)		.16 (.02)	
Job satisfaction				
Basic interests fit	.05 (.02)	1.25 (.63)	.05 (.02)	1.21 (.52)
Personality fit	.01 (.01)	3.83 (1.20)	.01 (.01)	3.93 (1.04)
Value fit	.02 (.01)	3.03 (1.06)	.02 (.01)	3.03 (1.08)
Knowledge fit	.03 (.01)	2.55 (1.03)	.03 (.01)	2.45 (.91)
Skill fit	.01 (.003)	5.19 (.77)	.01 (.01)	4.84 (.87)
<i>R</i> ²	.12 (.03)		.13 (.03)	
Needs-supplies fit				
Basic interests fit	.07 (.02)	1.01 (.10)	.07 (.02)	1.01 (.10)
Personality fit	.01 (.01)	3.46 (1.09)	.01 (.01)	3.80 (1.10)
Value fit	.02 (.01)	2.77 (.97)	.02 (.01)	2.66 (.98)
Knowledge fit	.02 (.01)	3.09 (.82)	.02 (.01)	3.22 (.96)
Skill fit	.004 (.003)	4.96 (.60)	.004 (.002)	5.29 (.73)
<i>R</i> ²	.12 (.03)		.13 (.03)	
Demands-abilities fit				
Basic interests fit	.03 (.01)	1.73 (.96)	.03 (.01)	1.70 (.94)
Personality fit	.01 (.01)	3.85 (1.15)	.01 (.01)	3.97 (1.29)
Value fit	.02 (.01)	3.36 (1.32)	.02 (.01)	3.52 (1.26)
Knowledge fit	.03 (.01)	2.07 (1.04)	.03 (.01)	2.00 (.95)
Skill fit	.01 (.01)	4.15 (1.02)	.01 (.01)	4.13 (1.13)
<i>R</i> ²	.10 (.02)		.11 (.02)	

Note. *N* ranges from 567 to 571. Criterion reliability was corrected.

Table 3

Studies 2 and 3: Descriptive Statistics of Person-Occupation Fit, Inter-relationships, and Correlations with Career Outcomes

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1 Basic Interest fit	0.14/0.19	0.28/0.33	-	0.14	0.11	0.31***	0.22**	0.31***	0.30***	0.29***	0.29***
2 Personality fit	0.02/0.06	0.31/0.36	0.13	-	0.09	0.13	0.10	0.02	0.00	0.04	-0.01
3 Value fit	0.19/0.16	0.67/0.63	0.09	0.03	-	0.07	0.14	0.02	-0.02	0.05	0.05
4 Knowledge fit	0.27/0.17	0.34/0.31	0.28***	0.13*	0.22***	-	0.44***	0.17*	0.18*	0.16	0.18*
5 Skill fit	0.15/0.07	0.34/0.32	0.11	0.12	0.15*	0.38***	-	0.13	0.15	0.20*	0.29***
6 Career choice satisfaction	3.60/3.65	0.90/0.89	0.28***	0.08	0.14*	0.10	0.12	-	0.71***	0.67***	0.60***
7 Job satisfaction	3.52/3.50	0.85/0.84	0.21**	-0.03	0.14*	0.06	0.05	0.69***	-	0.74***	0.65***
8 Needs-supplies fit	3.34/3.39	0.96/0.98	0.21**	0.06	-0.01	0.09	0.08	0.59***	0.70***	-	0.70***
9 Demands-abilities fit	3.77/3.70	0.80/0.89	0.13*	0.04	0.06	0.19**	0.05	0.49***	0.55***	0.60***	-

Note. *N* ranges from 238 to 388 for Study 2 (bachelor's degree graduates). *N* ranges from 147 to 264 for Study 3 (community college graduates). Correlation coefficients in Study 2 were presented below the diagonal, and correlation coefficients in Study 3 were presented above the diagonal. *M* = Mean; *SD* = Standard deviation.

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

Table 4*Study 2: Results of Dominance Analyses in the Sample of Bachelor's Degree Graduates*

	Uncorrected		Corrected	
	<i>Dominance Weight (SD)</i>	<i>Rank (SD)</i>	<i>Dominance Weight (SD)</i>	<i>Rank (SD)</i>
Career choice satisfaction				
Basic interests fit	.07 (.03)	1.10 (.33)	.08 (.03)	1.06 (.34)
Personality fit	.01 (.01)	4.94 (1.19)	.01 (.01)	4.73 (1.34)
Value fit	.02 (.01)	3.42 (1.31)	.02 (.02)	3.06 (1.28)
Knowledge fit	.01 (.01)	4.46 (1.13)	.01 (.01)	4.50 (1.05)
Skill fit	.01 (.01)	3.49 (1.43)	.01 (.01)	4.04 (1.35)
<i>R</i> ²	.13 (.04)		.15 (.04)	
Job satisfaction				
Basic interests fit	.04 (.03)	1.32 (.63)	.05 (.03)	1.35 (.81)
Personality fit	.01 (.01)	4.34 (1.40)	.01 (.01)	4.30 (1.38)
Value fit	.02 (.02)	2.48 (1.26)	.02 (.02)	2.48 (1.24)
Knowledge fit	.01 (.005)	4.11 (1.18)	.01 (.005)	3.99 (1.11)
Skill fit	.01 (.01)	4.37 (1.32)	.01 (.01)	4.10 (1.47)
<i>R</i> ²	.09 (.03)		.10 (.04)	
Needs-supplies fit				
Basic interests fit	.04 (.02)	1.31 (.85)	.05 (.03)	1.30 (.63)
Personality fit	.004 (.005)	4.46 (1.34)	.01 (.01)	4.21 (1.52)
Value fit	.004 (.005)	4.60 (1.35)	.01 (.01)	4.22 (1.53)
Knowledge fit	.01 (.01)	3.65 (1.33)	.01 (.01)	3.92 (1.42)
Skill fit	.01 (.01)	3.70 (1.39)	.01 (.01)	3.94 (1.38)
<i>R</i> ²	.07 (.03)		.09 (.04)	
Demands-abilities fit				
Basic interests fit	.02 (.02)	2.66 (1.49)	.01 (.01)	3.07 (1.53)
Personality fit	.004 (.005)	4.31 (1.27)	.01 (.01)	4.65 (1.35)
Value fit	.005 (.01)	4.26 (1.43)	.01 (.01)	4.14 (1.44)
Knowledge fit	.04 (.02)	1.33 (.70)	.04 (.02)	1.39 (.78)
Skill fit	.01 (.01)	3.77 (1.21)	.01 (.01)	4.07 (1.17)
<i>R</i> ²	.07 (.03)		.08 (.03)	

Note. *N* ranges from 238 to 243. Criterion reliability was corrected.

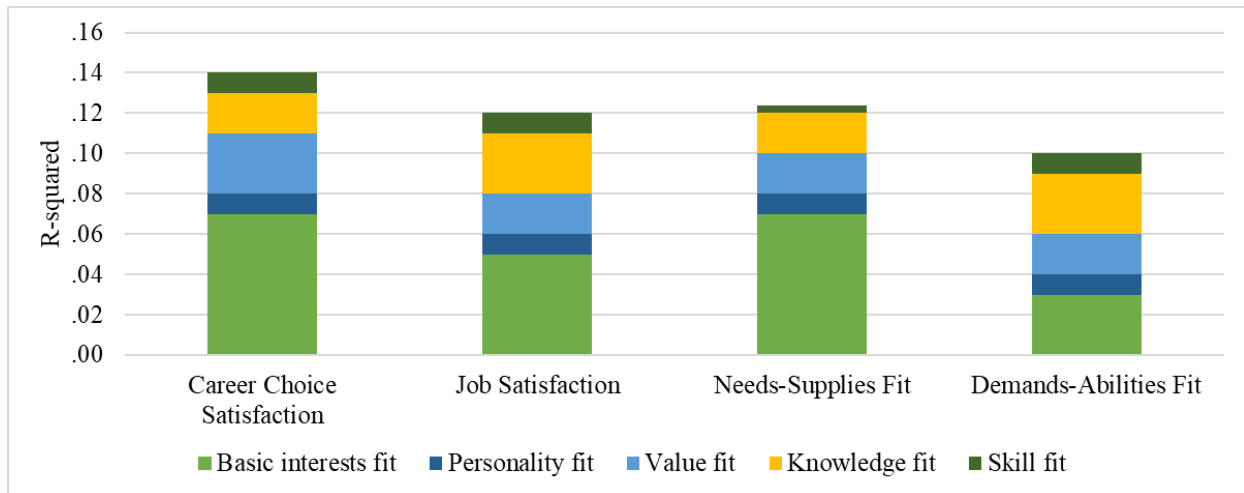
Table 5*Study 3 Results of Dominance Analyses in the Sample of Community College Graduates*

	Uncorrected		Corrected	
	<i>Dominance Weight (SD)</i>	<i>Rank (SD)</i>	<i>Dominance Weight (SD)</i>	<i>Rank (SD)</i>
Career choice satisfaction				
Basic interests fit	.09 (.04)	1.20 (.60)	.09 (.03)	1.20 (.49)
Personality fit	.01 (.01)	5.02 (1.13)	.01 (.01)	5.14 (1.12)
Value fit	.01 (.01)	4.89 (1.14)	.01 (.01)	4.79 (1.20)
Knowledge fit	.02 (.02)	3.15 (1.18)	.02 (.02)	3.39 (1.09)
Skill fit	.01 (.01)	3.78 (1.28)	.02 (.02)	3.78 (1.25)
<i>R</i> ²	.17 (.05)		.18 (.06)	
Job satisfaction				
Basic interests fit	.08 (.04)	1.18 (.48)	.09 (.05)	1.33 (.57)
Personality fit	.01 (.01)	4.61 (1.25)	.01 (.01)	4.83 (1.23)
Value fit	.01 (.01)	4.51 (1.42)	.01 (.02)	4.28 (1.52)
Knowledge fit	.02 (.02)	3.10 (1.36)	.02 (.02)	3.32 (1.39)
Skill fit	.02 (.02)	3.39 (1.25)	.02 (.02)	3.50 (1.38)
<i>R</i> ²	.15 (.05)		.18 (.07)	
Needs-supplies fit				
Basic interests fit	.06 (.03)	1.28 (.60)	.07 (.03)	1.38 (.65)
Personality fit	.005 (.01)	4.97 (1.12)	.01 (.01)	4.86 (1.12)
Value fit	.01 (.01)	4.22 (1.39)	.01 (.02)	4.47 (1.50)
Knowledge fit	.01 (.01)	3.51 (1.13)	.02 (.01)	3.46 (1.07)
Skill fit	.03 (.03)	2.57 (1.21)	.04 (.03)	2.51 (1.36)
<i>R</i> ²	.13 (.05)		.15 (.05)	
Demands-abilities fit				
Basic interests fit	.07 (.03)	1.58 (.65)	.08 (.04)	1.67 (.91)
Personality fit	.01 (.01)	4.95 (1.12)	.01 (.01)	4.88 (1.09)
Value fit	.01 (.01)	4.70 (1.13)	.01 (.01)	4.68 (1.23)
Knowledge fit	.02 (.01)	3.54 (.86)	.03 (.02)	3.48 (.92)
Skill fit	.07 (.04)	1.67 (.77)	.08 (.04)	1.68 (.78)
<i>R</i> ²	.19 (.05)		.22 (.05)	

Note. *N* ranges from 147 to 152. Criterion reliability was corrected.

Figure 1

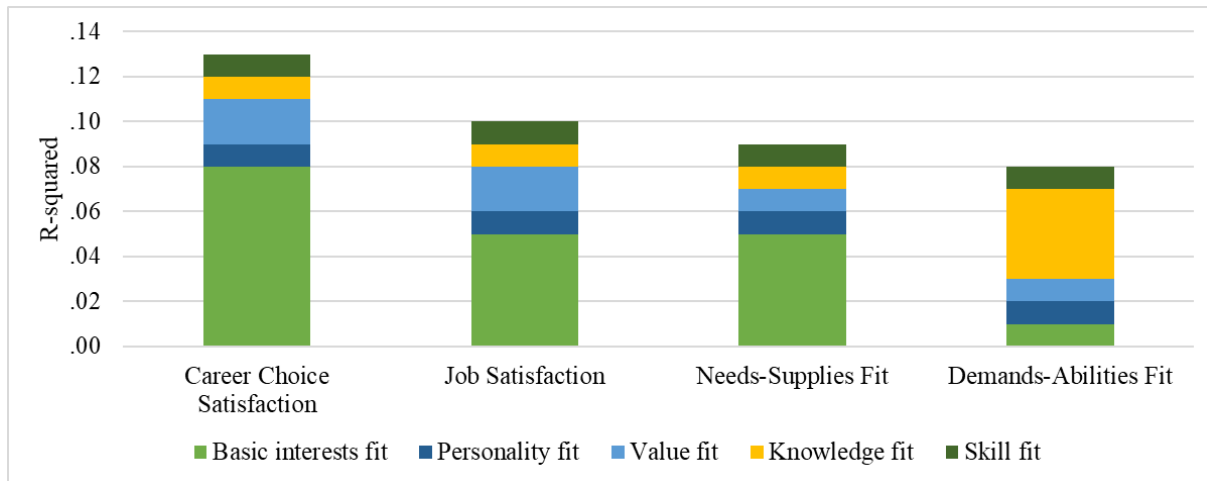
Study 1 Results of Dominance Analysis in the Prolific Sample



Note. *N* ranges from 567 to 571. Criterion reliability was corrected.

Figure 2

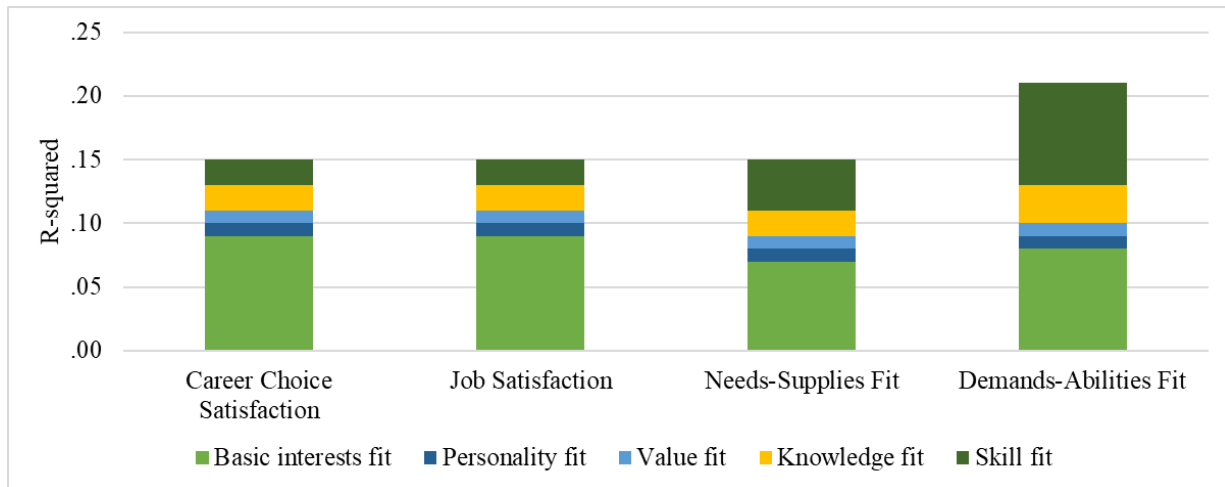
Study 2 Results of Dominance Analysis in the Sample of Bachelor's Degree Graduates



Note. *N* ranges from 238 to 243. Criterion reliability was corrected.

Figure 3

Study 3 Results of Dominance Analysis in the Sample of Community College Graduates



Note. *N* ranges from 147 to 152. Criterion reliability was corrected.

Appendices

A. The Development and Validation of the Integrative Fit Assessments

The development of our integrative assessment included three phases: item generation, item content review by subject matter experts, and item reduction and selection (Hinkin, 1998).

In the first phase, items for the five individual difference domains were developed based on two major sources, existing measures and occupational information from O*NET. Specifically, for basic interests, we examined common RIASEC inventories and pre-existing basic interest scales (Liao et al., 2008; Su et al., 2019). For personality, we adapted from the Big Five Inventory and the HEXACO Personality Inventory. For work values, we examined previous scales of career values (e.g., Abessolo et al., 2021; Consiglio et al., 2017). For knowledge and skills, we primarily relied on knowledge, skills, and abilities directly extracted from the O*NET database. However, some of these variables were already included in the Career One Stop's Skills Matcher (U.S. Department of Labor Employment and Training Administration, 2019). For each domain, some necessary components were not included in any of these pre-existing measures (e.g., Counseling, Customer Service, and Transportation for basic interests), or pre-existing items were improper in breadth or difficult to understand. In such cases, we created new items to ensure the content coverage and quality of the items.

Following item generation, we had a panel of three professors and three graduate students review all the items for clarity and parsimony. We next mapped the measures of personal attributes to occupational descriptors from O*NET. Specifically, basic interests and knowledge were connected to knowledge variables. We decided to use basic interests because of its greater predictive power for career outcomes compared to the RIASEC model. Personality was connected with work style variables. Work values were matched to information about work

values, work contexts, and work activities. Skills correspond to a wide range of ability and skill variables. To ensure further alignment between our new measures and occupational variables in the O*NET database, the same panel reviewed the matching and agreed each measure was adequately and properly connected to the corresponding occupational variables.

At the stage of item reduction and selection, we referred to the correlational structure, distributional qualities, and content of the items based on the data collected in Study 1. Specifically, we used factor analyses to examine the inter-item correlational structure of the measure, identifying items that did and did not fit the expected structure of the measure. In general, we sought to retain items that (1) loaded strongly onto the expected subscale (both in the absolute sense and relative to the others), (2) had greater conceptual similarity to the specified O*NET variables, (3) added theoretically meaningful content to the scale, (4) were minimally skewed, and (5) were proper for self-reports. We present a full list of the items and their corresponding occupational variables from O*NET in Appendix B.

B. A Full List of the Scale Items and Connection with O*NET Variables

Scale Items	Corresponding O*NET Variables
<i>Basic Interests</i>	
Mechanics	
Repair car engines	Mechanical
Perform aircraft maintenance	
Install radio communication systems	
Construction	
Build wood wall shelves	Building and Construction
Build kitchen cabinets	
Sand and refinish a piece of furniture	
Engineering	
Design a structure that can withstand heavy wind	Engineering and Technology
Develop lighter and stronger materials for new products	
Redesign a production line to improve its efficiency	
Transportation	
Drive a bus	Transportation
Drive a delivery truck	
Operate a train	
Physical Science	
Study the formation and evolution of galaxies	Chemistry; Physics; Geography
Analyze a mineral sample found on Mars	
Study the causes for earthquakes and tsunamis	
Medical Science	
Investigate the cause of a chronic health problem	Medicine and Dentistry
Research the side effects of a medicine	
Investigate prevention methods for diseases	
Math	Mathematics

Solve mathematical problems

Learn about a new theory in geometry

Use mathematical equations to solve practical problems

Social Science

Investigate how poverty influences educational attainment

Study the effects of public policy on violence reduction

Research why people have stereotypes and prejudice

Design

Create a piece of artistic and functional furniture

Create the set for a movie or stage play

Design the layout and lighting of an exhibition

Arts

Sketch a picture

Paint a landscape

Draw illustrations for a book

Writing

Write a novel

Write short stories

Study creative writing

Teaching

Teach students a new set of skills

Explain a topic to someone with no prior knowledge

Teach a beginner how to perform a task

Counseling

Help people with family problems

Help conduct a group therapy session

Helping kids through interpersonal problems

Customer service

Greet customers and answer questions

Psychology;
Sociology and Anthropology

Design

Fine Arts

English Language;
Communications and Media

Education and Training

Therapy and Counseling

Customer and Personal Service

Assist clients planning for special occasions

Work in customer service

Management

Manage a medium-sized organization

Supervise a large number of employees

Serve as the president of a professional association

Administration and Management

Sales & Marketing

Persuade customers to try a new product

Increase sales for a company during a promotion week

Sell services to a target group of people

Sales and Marketing

Law and Government/Politics

Present arguments in a courtroom

Resolve legal disputes between parties

Lead a committee to make policy decisions

Law and Government

Finance and Accounting

Analyze the financial statements of a company

Monitor account balance and prepare monthly statements

Calculate tax deductions for a business

Economics and Accounting

Computers

Create a new computer database

Monitor the daily performance of computer systems

Diagnose and resolve computer hardware or software problems

Computers and Electronics

Office Work

Enter personnel records into a computer program

Catalog files in an office

Print and disseminate documents to be used at a conference

Clerical

Personality

Extraversion - Sociability

Is outgoing, sociable

Social Orientation (Work Styles)

Tends to be quiet

Extraversion - Assertiveness

Is dominant, acts as a leader

Prefers to have others take charge

Extraversion - Energy Level

Is less active than other people

Is full of energy

Agreeableness - Compassion

Is compassionate, has a soft heart

Can be cold and uncaring

Agreeableness - Respectfulness

Is respectful, treats others with respect

Is sometimes rude to others

Agreeableness - Trust

Tends to find fault with others

Assumes the best about people

Conscientiousness - Organization

Tends to be disorganized

Keeps things neat and tidy

Conscientiousness - Productiveness

Has difficulty getting started on tasks

Is persistent, works until the task is finished

Conscientiousness - Responsibility

Can be somewhat careless

Is reliable, can always be counted on

Emotional Stability - Anxiety

Is relaxed, handles stress well

Worries a lot

Emotional Stability - Emotional Volatility

Leadership (Work Styles)

Initiative (Work Styles)

Concern for Others (Work Styles)

Cooperation (Work Styles)

Cooperation (Work Styles)

Attention to Detail (Work Styles)

Persistence (Work Styles)

Dependability (Work Styles)

Stress Tolerance (Work Styles)

Self Control (Work Styles)

Is emotionally stable, not easily upset
Is temperamental, gets emotional easily

Openness - Intellectual Curiosity

Is complex, a deep thinker
Has little interest in abstract Ideas

Openness - Aesthetic Sensitivity

Has few artistic interests
Is fascinated by art, music, or literature

Openness - Creative Imagination

Has little creativity
Is original, comes up with new Ideas

Integrity

Would never steal, even if I knew I could get away with it.
Always follows the rules
Would cheat to win a game

Work Values

Management

Supervise other people's work
Coordinate or lead others
Be responsible for others' work

Outdoors

Work outside
Be out in nature while I work

Physical

Perform physical work tasks
Get exercise while I work

Salary

Have a high salary
Make enough money to buy expensive things

Critical Thinking (Skills - Basic Skills)

Artistic (Interests)

Innovation (Work Styles)

Integrity (Work Styles)

Guiding, Directing, and Motivating Subordinates (Work Activities);
Coordinate or Lead Others (Work Activities);
Responsibility for Outcomes and Results (Work Context)

Outdoors, Under Cover (Work Context);
Outdoors, Exposed to Weather (Work Context)

Performing General Physical Activities (Work Activities);
Spend Time Walking and Running (Work Context)

Median Annual Salary (Bureau of Labor Statistics)

Prestige

Have a prestigious career

Have a high-status career

Altruism

Provide personal care to others

Build and maintain personal relationships

Provide service to others

Help others develop and grow

Occupational Knowledge

Biology: plant, animal and cell functions

Chemistry: chemical processes and their applications

Communications and Media: conveying information using written, oral, and visual media

Computers and Electronics: computer hardware and software, including applications and programming

Construction: building materials, methods, and tools

Customer Service: handling customer needs and resolving service problems

Design: designing techniques, tools, and principles

Economics and Accounting: principles and practices of accounting, economics, and financial markets

Engineering & Technology: practical applications of engineering science and technology

Fine Arts: developing art forms, such as music, painting, or drama

Food Production: planting, growing, and harvesting food products

Law & Government: legal codes, court procedures, government regulations, and political processes

Managing others: leading other people and business planning

Mathematics: using arithmetic, algebra, geometry, calculus, and statistics

Mechanics: designing, using, repairing, and maintaining machines

Medicine and Dentistry: providing health care

Recognition (Work Values)

Assisting and Caring for Others (Work Activities);

Establishing and Maintaining Interpersonal

Relationships (Work Activities);

Relationships (Work Values);

Coaching and Developing Others (Work Activities)

Biology

Chemistry

Communications and Media

Computers and Electronics

Building and Construction

Customer and Personnel Service

Design

Economics and Accounting

Engineering and Technology

Fine Arts

Food Production

Law and Government

Administration and Management

Mathematics

Mechanical

Medicine and Dentistry

Office Work: completing administrative and clerical work, such as word processing and managing records
 Personnel and Human Resources: principles and procedures for recruiting, hiring, and training employees
 Physics: physical principles, laws, and their applications
 Production and Processing: overseeing manufacturing and distribution processes
 Psychology: methods of research, assessment, and treatment of human behavior
 Public Safety and Security: equipment, procedures, and strategies to promote security operations
 Sales and Marketing: promoting and selling products or services
 Sociology and Anthropology: theories of group behavior, societal trends, and human culture
 Teaching and Course Design: applying methods and principles of instruction
 Therapy and Counseling: applying principles and methods used in counseling
 Transportation: principles and methods for moving people or goods by air, rail, sea, or road

Clerical
 Personnel and Human Resources
 Physics
 Production and Processing
 Psychology
 Public Safety and Security
 Sales and Marketing
 Sociology and Anthropology
 Education and Training
 Therapy and Counseling
 Transportation

Skills

Body Coordination: moving your arms, legs, and body together
 Complex Problem Solving: figuring out the best way to solve a difficult problem
 Creative Thinking: developing original ways to solve a problem
 Financial Management: determining how money will be spent to get work done
 Finger Dexterity: controlling your fingers to precisely to manipulate small objects
 Helping People: understanding how to help others in need
 Instructing: teaching people how to do something

Gross Body Coordination (Abilities - Physical Abilities)
 Complex Problem Solving (Skills - Complex Problem Solving Skills)
 Originality (Abilities - Cognitive Abilities)
 Management of Financial Resources (Skills - Resource Management Skills)
 Finger Dexterity (Abilities - Psychomotor Abilities)
 Service Orientation (Skills - Social Skills)
 Instructing (Skills - Social Skills)

Persuasion: convincing others to change their minds or behavior
 Physical Strength: using muscle force to lift, push, pull, or carry objects
 Programming: writing computer programs for various purposes
 Repairing: fixing machines using tools
 Science: using scientific rules and methods to solve problems
 Social Coordination: Adjusting actions in relation to others' actions
 Social Perceptiveness: understanding others' reactions and behaviors
 Speaking: talking to others to convey information effectively
 Technology Design: building and adapting new technology
 Time Management: managing your own time and the time of others
 Troubleshooting: identifying and fixing problems in machines or technology
 Writing: communicating effectively in writing

Persuasion (Skills - Social Skills)
 Static Strength (Abilities - Physical Abilities)
 Programming (Skills - Technical Skills)
 Repairing (Skills - Technical Skills)
 Science (Skills - Basic Skills)
 Coordination (Skills - Social Skills)
 Social Perceptiveness (Skills - Social Skills)
 Speaking (Skills - Basic Skills)
 Technology Design (Skills - Technical Skills)
 Time Management (Skills - Resource Management Skills)
 Troubleshooting (Skills - Technical Skills)
 Writing (Skills - Basic Skills)

Note. When multiple O*NET variables are matched with a single personal variable, an average score was calculated to represent the occupational variable.

C. Demographic Information of Participants in the Research

Table A1

Study 1: Demographic Information of the Prolific Sample

Variable	Mean	SD	N	%
Age	45.80	16.06		
Gender				
Male			375	48.8
Female			383	49.9
Other or Prefer not to say			10	1.3
Ethnicity				
Asian/Asian			57	7.4
Black/African			96	12.5
Latino/Hispanic			26	3.4
Native American/First Nations			2	0.3
White/European			549	71.5
Other or Prefer not to say			38	4.9
Education				
Less than high school			2	0.3
High school or GED			78	10.2
Some college			149	19.4
Associate's degree (1 to 2-year program)			80	10.4
College or undergraduate degree (4-year program)			284	37.0
Graduate degree (e.g., M.A., M.D., Ph.D.)			175	22.8
Relationship status				
Married			320	41.7
In a long-term relationship (but not married)			129	16.8
Divorced			74	9.6
Widowed			12	1.6
Single			226	29.4
Other or Prefer not to say			7	0.9

Note. N = 768.

Table A2*Studies 2 Demographic Information of the Sample of Bachelor's Degree Graduates*

Variable	Mean	SD	N	%
Age	22.56	2.56		
Gender				
Male			99	24.9
Female			290	73.0
Other or Prefer not to say			8	2.0
Ethnicity				
Asian/Asian			147	37.0
Black/African			19	4.8
Latino/Hispanic			88	22.2
White/European			131	33.0
Other or Prefer not to say			12	3.0
Education				
High school or GED			6	1.5
Some college			12	3
Associate's degree (1 to 2-year program)			5	1.3
College or undergraduate degree (4-year program)			374	94.2
Relationship status				
Married			18	4.5
In a relationship (not married)			83	20.9
Single			214	53.9
In a long-term relationship (but not			78	19.6
Other or Prefer not to say			4	1.0

Note. N = 397.

Table A3*Study 3 Demographic Information of the Sample of Community College Graduates*

Variable	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>%</i>
Age	24.65	7.64		
Gender				
Male			45	16.2
Female			219	79.1
Other or Prefer not to say			13	4.7
Ethnicity				
Asian/Asian			44	15.9
Black/African			26	9.4
Latino/Hispanic			117	42.2
White/European			80	28.9
Other or Prefer not to say			10	3.6
Education				
Less than high school			2	0.7
High school or GED			15	5.4
Some college			58	20.9
Associate's degree (1 to 2-year program)			175	63.2
College or undergraduate degree (4-year program)			24	8.7
Graduate degree (e.g., M.A., M.D., Ph.D.)			1	0.4
Other or Prefer not to say			2	0.7
Relationship status				
Married			48	17.3
In a relationship (not married)			44	15.9
Divorced			5	1.8
Single			133	48.0
In a long-term relationship (but not married)			38	13.7
Other or Prefer not to say			9	3.2

Note. *N* = 277.