Understanding Workplace Uncertainty: Inception, Development, and Preliminary

Validation of the Workplace Uncertainty Tolerance Scale

by

Joshua S. Acosta

A dissertation submitted to the Graduate Faculty of
Auburn University
in partial fulfillment of the
requirements for the Degree of
Doctor of Philosophy

Auburn, Alabama
August 6, 2022

Keywords: workplace, uncertainty, volatility, ambiguity, interpersonal, tolerance

Approved by

Dr. Ana M. Franco-Watkins, Interim Dean, Professor of Psychological Sciences
Dr. Daniel Svyantek, Professor of Psychological Sciences
Dr. Jesse Michel, Associate Professor of Psychological Sciences
Dr. Jinyan Fan, Professor of Psychological Sciences
Dr. Laura W. Plexico, Department Chair, Professor of Speech, Language, and Hearing Sciences

Abstract

Uncertainty is a fundamental aspect of the work experience (Simon, 1955; 1956), yet little scholarly research exists examining human functioning when experiencing uncertainty at work. This dissertation advances the understanding of the industrial and organizational psychological scientific literature through two major contributions. The first contribution is the establishment of a theoretical foundation for understanding workplace uncertainty grounded in decision theory. The framework specified was refined throughout, given the empirical findings. The second contribution is the creation of a psychological scale to measure the conceptualized individual-level trait of workplace uncertainty tolerance. I executed three studies in three phases to establish construct validity of the scale. In phase one, an initial set of items was generated and assessed for content validity. The second phase evaluated the refined set of items for factor structure and psychometric properties. The third phase confirmed the factor structure and established preliminary convergent, discriminant, and criterion-related validity. Results suggested an alternative theory for workplace uncertainty than proposed, comprising three unique factors in theory and measurement: volatility tolerance, ambiguity tolerance, and interpersonal uncertainty tolerance. Implications for theory and practice were set forth as they relate to the workplace uncertainty tolerance scale's anticipated utility for industrial and organizational psychology academics and practitioners.

Acknowledgements

First and foremost, I want to extend a very heartfelt recognition of gratitude to my wife, Rachel, for being the most integral aspect of my life, being unconditionally supportive, and, more importantly, making me a better person throughout this graduate school journey. This dissertation would not be possible without her. Through this journey, she went from my girlfriend to fiancé to wife, and I'm thankful every day that she chose and bet on me. I also extend my sincerest gratitude to my dad, mom, and sister for being immensely supportive throughout this journey. They are the three I relish sharing my success with the most. I also want to extend my sincerest and humblest dedication of gratitude to my advisor, Dr. Ana Franco-Watkins, my academic mom, whose council, patience, and wisdom are always unmatched. I also want to give a shoutout to my Georgia and Auburn families. I have had the pleasure of becoming friends with some of the most impressive and kind individuals, and I would like to thank you all for letting me be part of your lives. Additionally, I want to recognize the support that Drs. Jesse Michel, Jinyan Fan, Dan Syvantek, and Laura Plexico have given me. They have my gratitude for their dedication and commitment to this project and my long-term professional development and growth. I also want to recognize my colleagues at SAP SuccessFactors for their ongoing support in completing this project while working full-time. And last but certainly not least, I want to acknowledge the supportive role of my dogs, Cooper and Rosie, for being the best fur babies one could ask for.

Table of Contents

List of Tables

List of Figures

Understanding Workplace Uncertainty: Inception, Development, and Preliminary Validation of the Workplace Uncertainty Tolerance Scale

In the experience of work, humans render judgments and make decisions to function in their environments. A hiring manager may evaluate applicants to extend a job offer, or an executive may decide upon a strategy to gain a competitive advantage in their market. While these decisions differ in impact, the property of uncertainty underlies both. Uncertainty is the degree of information a human possesses concerning their environment (Lindley, 2014; Tversky & Kahneman, 1992). Humans experience uncertainty when information is absent, incomplete, or subject to change. The hiring manager may be uncertain of which applicant capabilities to measure, or the executive may be uncertain of market circumstances impeding their strategy's effectiveness. Uncertainty often makes workplace decisions difficult and exists because of the dynamic nature of work and limitations of human cognition (Barley et al., 2017; Cascio & Montealegre, 2016; Salas et al., 2017). Humans live in a perpetual state of finite knowledge immutable to the human experience, life, and work, and function by evaluating the information they possess to decide upon courses of action in the face of uncertainty (Simon, 1955; 1956).

Workplace Uncertainty

Uncertainty is a theoretical impetus for many areas of workplace research (Bauer et al., 2007; Bangerter et al., 2012; Cable & Judge, 1994; Johnson & Stinson, 1975; O'Reilly & Caldwell, 1980; Rowe, 1994; Ryan & Ployhart, 2014; Turban, 2001). Scholars have theorized that the purpose of personnel selection is to reduce an organization's uncertainty in identifying suitable individuals for jobs (Bangerter et al., 2012; Ryan & Polyhart, 2014). Likewise, applicants encounter uncertainty in recruitment and job choice processes and seek information on employment prospects to reduce uncertainty in making career decisions (Chapman et al., 2005;

9

Uggerslev et al., 2012). Newcomers continue to experience uncertainty in new roles, and organizations often implement socialization strategies to reduce their uncertainty when integrating into novel work environments (Bauer et al., 2007; Berger, 1979; Berger & Calabrese, 1975). Workplace uncertainties exist beyond these specified domains, yet researchers seldomly consider uncertainty beyond a theoretical catalyst within the industrial and organizational psychology scientific literature (Judge et al., 1999).

Empirically investigating uncertainty as a foundational element underlying work behavior is imperative due to the evidence demonstrating its influence on decision processes. Research demonstrates that humans are predisposed to evaluate known options more favorably than unknown options (Ellsberg, 1961; Epstein, 1999; Kahneman & Tversky, 1979; Lindey, 2014; Nau; 2006; Tversky & Kahneman, 1983; 1992). The uncertainty aversion preference exists to minimize and safeguard one from excess risk, and studies have provided evidence for the presence of uncertainty aversion within workplace decisions (Acosta & Franco-Watkins, 2021; Dow & Werlang, 1992; Epstein, 1999; Nau, 2006). Humans perceive unpredictability, volatility, and inconsistency in their environment as stressful due to increased inherent risk and have an innate need to propagate their lives with structure to reduce uncertainty (Dewey, 1929; Festinger, 1962; Hogan & Blickle, 2013). However, research indicates that individuals are not uniform in tolerating uncertainty in their environment (Bunder, 1962; Judge et al., 1999).

Workplace uncertainties matter, yet our current understanding is disorganized in framework and measurement. Industrial and organizational psychologists currently lack a theoretical taxonomy to classify workplace uncertainties and a mechanism to measure how individuals differ in functioning under workplace uncertainty. Therefore, the purpose of this dissertation is threefold. The first is to establish a theoretical foundation for classifying

workplace uncertainty to form the basis for conceptualizing a new construct; workplace uncertainty tolerance. The second is to operationalize workplace uncertainty tolerance and expound on a conceptual nomological network to demonstrate the value in how the construct relates to other pertinent work psychology variables. The third is to create a psychological scale measuring the individual trait of workplace uncertainty tolerance.

Providing a theoretical underpinning for classifying workplace uncertainties and creating a mechanism to understand individual workplace uncertainty tolerance fills a knowledge gap in the work psychology literature. Considering what workers do not know and how uncertainty affects their decisions facilitates a greater understanding of work behavior beyond only considering what is known. A workplace uncertainty tolerance scale can increase understanding of how people socialize, fit into, and function in work environments with variable degrees of uncertainty. Implications extend to research and practice, including the workstreams of personnel selection, newcomer socialization, human performance, and interpersonal relationships with colleagues.

Framework for Understanding Workplace Uncertainty

Work environment uncertainty taxonomy

Given that work environments are diverse, I propose utilizing person-environment fit theory to serve as a theoretical framework for operationalizing uncertainties in referent to workplace environments. Person-environment fit theory asserts that humans have a greater fundamental understanding of workplace phenomena when both the person and the environment are considered (van Vianen, 2018). Person-environment fit theory posits that humans have an innate need to fit, function, and contribute collectively in groups and that individuals strive to fit

11

into work environments because it brings them consistency and satisfaction (Hogg, 2000; Ryan & Deci, 2019; van Vianen, 2018; Yu, 2013).

Person-environment fit theory is an appropriate theoretical framework for founding a work environment uncertainty taxonomy because the theory compartmentalizes domains of work (Kristof-Brown et al., 2005). Person-environment fit theory provides an exhaustive framework for work domains, beginning with complementary and supplementary fit paradigms (Cable & Edwards, 2005). Complementary fit is composed of the sub-facets of person-vocation fit and person-job fit and takes the perspective that the environment and the person fulfill each other's needs (van Vianen, 2018). Either by providing an outlet for fulfilling interests or by a person expressing their knowledge, skills, or abilities through performing job demands (Cable & Edwards, 2004; Holland, 1997; Kristof, 1996; Van Iddekinge et al., 2011). Supplementary fit attributes degrees of congruence between the characteristics of the person and the environment and is composed of the sub-facets of person-organization fit, person-supervisor fit, and person-team fit (Cable & Edwards, 2004). People, climates, and cultures coalesce variably with the individual (Kowlowski & Bell, 2013; Schneider, 1987). Each type of fit provides a domain for uncertainty to vary in the workplace.

Workplace uncertainty tolerance

Existing research indicates that individuals will not be uniform in how uncertainty affects their decision making (Bunder, 1962; Judge et al., 1999; Kahneman & Tversky, 1979; Tversky & Kahneman, 1992). While humans evaluate uncertainty unfavorably in most circumstances, the extent of the preference depends on the individual level trait of uncertainty tolerance. Bunder first conceptualized intolerance of ambiguity as a unidimensional tendency to perceive and interpret ambiguous situations as sources of threat instead of desirable (1962). Ambiguity is an

aspect of uncertainty when contextual information regarding one's environment is missing, leaving elements open to interpretation. Since Bunder, there have been numerous subsequent conceptualizations and applications to various areas of psychological research (Carleton et al., 2007; Gerrity et al., 1995; MacDonald, 1970; McLain, 2009; Tsui, 1993; Xu & Tracey, 2015).

Past research has investigated uncertainty tolerance in the areas of executive decision making (Cabantous, 2007; Katsaros et al., 2014; Nicolaidis & Katsaros, 2011; Yurtsever, 2001), consumer psychology (You et al., 2018), education (Tegano, 1990; Tepanes et al., 2009), career decision making (Storme et al., 2019; Xu & Tracey, 2015), political psychology (Jessani & Harris, 2018), personality research (Houran & Williams, 1998; Luzsa & Mayr, 2019) and healthcare research (Hancock & Mattick, 2019; Kuhn et al., 2008). In the organizational behavior literature, most studies have examined uncertainty tolerance concerning how well individuals cope with stress, organizational change, and anxiety (Ashford & Cummings; 1985; Gupta & Govindarajan, 1984; Judge et al., 1999; Keenan, 1978; Keenan & McBain, 1979; McLain, 1993; Lorsch & Morse, 1974; Rush et al., 1995). A noteworthy study provided evidence that tolerance for ambiguity is positively related to managerial coping with organizational change (Judge et al., 1999).

Proposed Scale Definition and Operationalization

Workplace uncertainty tolerance is the individual-level predisposition to perceive uncertainty in their work environment as a source of threat or non-threat (Bunder, 1962). The trait of workplace uncertainty tolerance is grounded in the assertion that individuals will not view, react to, tolerate, or function under workplace uncertainty uniformly. While evidence suggests that we all have a bias against uncertain alternatives (i.e., evaluate them as less favorable), this phenomenon is likely complex and will depend on the proposed trait. An

13

individual's workplace uncertainty tolerance will prescribe how they behave under workplace uncertainties.

Workplace uncertainty tolerance is operationalized as an individual-level predisposition on a continuum between tolerance and intolerance of uncertainty. Workplace uncertainty tolerance is concerned with how individuals perceive and behave in environments with variable uncertainty (i.e., lack of information present in environments that require action; Bunder, 1962). Uncertainty tolerant individuals in the face of uncertainty will become excited and energized by the unknown and adapt to the challenge uncertainty presents in the workplace. They are tolerant of taking upon excess risk in their work by being more willing to conduct themselves and make decisions in uncertain work environments. Conversely, uncertainty intolerant individuals will disengage through apprehension of the greater risk that uncertain workplace environments naturally contain. Understanding where individuals lie on the continuum will lead to a greater understanding of how humans react to, fit, and function in various degrees of uncertainty in work environments.

Workplace uncertainty tolerance's facets will represent the types of fit found in the person-environment fit literature while simultaneously emphasizing parsimony for the proposed content domain structure (Fabrigar et al., 1999; Kristof-Brown et al., 2005; Preacher et al., 2013; van Vianen, 2018). Workplace uncertainty tolerance comprises four sub-domains that individuals can tolerate to variable extents. The four sub-domains of workplace uncertainty tolerance are job task, organizational, peer interpersonal, and supervisor interpersonal uncertainty tolerance. These sub-facets reflect adaptations of person-job, person-organization, person-team, and person-supervisor fit, respectively (Kristof-Brown et al., 2005; van Vianen, 2018).

Job Task Uncertainty Tolerance

Job task uncertainty tolerance is the individual-level degree for preference of procedural clarity, direction, and structure of completing the tasks of a job. Individuals intolerant of job task uncertainty will have high compatibility and fit well into jobs with detailed directions for completing work. They will thrive under direction and transparency and view uncertainty in job tasks as stressful. They will seek to reduce job task uncertainty in their environment by seeking direction and disengage in sustaining effort to complete job tasks high in uncertainty.

Conversely, individuals tolerant of job task uncertainty will have high compatibility and fit well into jobs with little direction for completing work. They will thrive in the face of ambiguous and vague demands and view job task uncertainty as stimulating and inducing a creative challenge - a tabula rasa for competence. Rather than attempting to reduce uncertainty, they will engage in high uncertainty job tasks and be captivated by the creativity uncertain job demands impose.

Hypothesis 1: Job task uncertainty tolerance will emerge as a factor for workplace uncertainty tolerance.

Organizational Uncertainty Tolerance

Organizational uncertainty tolerance is the individual-level degree for preference of procedural clarity, direction, and structure of navigating organizations' structures, cultures, climates, and procedures (Schneider, 1987; Schneider et al., 1998). Individuals intolerant of organizational uncertainty will have high compatibility and fit well into organizations with enumerated missions, goals, structures, and procedures. They will thrive in knowing established procedures for navigating organizational structures and prefer awareness of its mission and

goals. They will find comfort in the uniformness of structures and procedures in place and direct their effort toward established missions and goals.

Contrarily, individuals tolerant of organizational uncertainty will have high compatibility and fit well into organizations with uncharted missions, goals, and unsystematic structures and procedures. They will enjoy the retained effort of not navigating systematic organizational structures or procedures and be indifferent to knowing its strategic mission and goals.

Hypothesis 2: Organizational uncertainty tolerance will emerge as a factor for workplace uncertainty tolerance.

Peer Interpersonal Uncertainty Tolerance

Peer interpersonal uncertainty tolerance is the individual-level degree for preference of structured and predictable social interactions between a person and their work peers. Individuals intolerant of peer interpersonal uncertainty will have high compatibility and fit well into environments where social interactions with peers are predictable, structured, and have cyclical occasions for interaction for work and non-work-related social exchange. They will prefer segmentation between work and personal social exchanges and seek to reduce interpersonal uncertainty by systematically getting to know their peers' habits, mannerisms, and tendencies.

Conversely, individuals tolerant of peer interpersonal uncertainty will have high compatibility and fit well into workgroups of peers where social interactions are extemporaneous, impromptu, and spur-of-the-moment for work and non-work related social exchanges. They will prefer an integrative approach to getting to know peers' work and personal selves and gradually attempt to reduce interpersonal uncertainty in their environment by getting to know them through working with them daily.

Hypothesis 3: Peer interpersonal uncertainty tolerance will emerge as a factor for

workplace uncertainty tolerance.

Supervisor Interpersonal Uncertainty Tolerance

Supervisor interpersonal uncertainty tolerance is the individual-level degree for preference of structured and predictable social interactions between the person and a work supervisor. Individuals intolerant of supervisor interpersonal uncertainty will have high compatibility and fit well into environments where social interactions with supervisors are predictable, purposeful in impetus, and structured for work and non-work-related interpersonal interactions. They will intentionally get to know their supervisor's management styles, habits, and tendencies in work and non-related social interactions. They will prefer a cyclical cadence to interact with supervisors and react well to management styles that initiate structure to reduce their environmental uncertainty.

Contrarily, individuals tolerant of supervisor interpersonal uncertainty will have high compatibility and fit well into environments where social interactions with supervisors are casual, informal, and unstructured for work and non-work-related social interactions. They will prefer their supervisor be less structured in communication and react well to undemanding management styles and laissez-faire supervision. They will naturally become familiar with their supervisor's management style, habits, and tendencies for work and non-work-related social interactions.

Hypothesis 4: Supervisor interpersonal uncertainty tolerance will emerge as a factor for workplace uncertainty tolerance.

These four content domains are not exhaustive of all job elements where uncertainty faces workers; however, the four content domains expounded upon will serve as a baseline for

17

providing a framework to capture individual uncertainty tolerance referencing prototypical domains of work environments across jobs, organizations, and industries. The four proposed sub-scales mirror several prominent facets of the person-environment fit literature, which serves as a theory to lend meaning to the interface between workers and their environments (van Vianen, 2018). These sub-domains have theoretical and empirical evidence suggesting that humans evaluate their job, organization, and social interaction with their peers and supervisors differently (Kristof-Brown et al., 2005).

Inaugural Nomological Network

Workplace uncertainty tolerance is theoretically related to many variables studied by industrial and organizational psychology academics and practitioners. This section aims to elucidate an initial nomological network of workplace uncertainty tolerance. I expand on potential predictors, correlates, and outcomes for which the construct at hand should be theoretically related. An inaugural mapping of a proposed nomological network demonstrates the value of studying and creating a workplace uncertainty tolerance scale for theory and practice.

Risk Taking Propensity. Risk taking propensity is the situational-dependent tendency to engage in behaviors with a prospect of a negative consequence (Blais & Weber, 2006; Zhang et al., 2018). There is a direct theoretical relationship between risk and uncertainty, and it is reasonable to contend that there will also be a relationship between risk taking propensity and workplace uncertainty tolerance. The relationship is likely to be positive as when risk taking propensity is high (i.e., individuals exhibit risk seeking behaviors), individuals are likely to be tolerant of workplace uncertainty. The inherent greater risk embedded in higher uncertainty alternatives will not affect risk seeking individuals' decision process to the same extent as risk-averse individuals.

Hypothesis 5: Workplace uncertainty tolerance will positively relate to risk taking propensity.

Optimism. Optimism is the extent to which individuals hold generalized favorable expectancies for the future (Carver et al., 2010). Evidence has shown that optimism is related to widely examined workplace outcomes such as organizational citizenship behaviors (Munyon et al., 2010), and research has found compelling evidence that higher levels of optimism are associated with the propensity to engage in risky behavior (Anderson & Galinsky, 2006). The empirical evidence suggests a positive relationship between optimism and workplace uncertainty tolerance because optimistic individuals are more likely to engage in risk in the hope that the risky decision will yield positive outcomes.

Hypothesis 6: Workplace uncertainty tolerance will be positively related to optimism.

Tenacity. Tenacity or perseverance is the trait that sustains goal-directed action and energy when faced with obstacles (Braum & Locke, 2004). Research has shown that tenacity is related to workplace problem solving and organizational resourcefulness (Braum & Locke, 2004; De Clercq & Belausteguigoitia, 2017). Based on an individual's tenacity, individuals may evaluate and engage in uncertain work situations differently due to the impeding obstacle of a lack of information in their work environments. Tenacious individuals will be less likely to allow uncertainty to prevent goal attainment. The relationship between tenacity and workplace uncertainty tolerance will likely be positive and explained by persistence to complete goals under the stress of greater uncertainty.

Hypothesis 7: Workplace uncertainty tolerance will be positively related to tenacity.

Feedback-seeking. Feedback-seeking behaviors are the conscious devotion to investigating behavior's correctness for attaining valued end states (Ashford & Cummings, 1985;

Ashford et al., 2016). Feedback can be sought proactively by direct inquiry or observing

environmental cues to infer information to assess the correctness and subsequently direct

behavior (Ashford et al., 2016). Workplace uncertainty tolerance will be related to direct and

indirect feedback inquiry because feedback is a direct means to reduce workplace uncertainty.

Individuals do not seek feedback uniformly, and workplace uncertainty tolerance may help

explain why. The relationship between workplace uncertainty tolerance and feedback-seeking

behaviors will be negative because uncertainty intolerant individuals will be likelier to engage in

behaviors that reduce workplace uncertainty. Uncertainty tolerant individuals will have less of an

inherent predisposition to reduce their behavior through feedback seeking.

Hypothesis 8: Workplace uncertainty tolerance will be negatively related to feedback-

seeking behaviors.

Self-regulation. Self-regulation of arousal is the cognitive process by which individuals

suppress their mental states of emotion (Grandey, 2000; Gross, 1998). Uncertainty often evokes

apprehension or fear due to the inherent risk in uncertainty, which contributes to why individuals

often find uncertainty stressful and unattractive (Ellsberg, 1961). The relationship between self-

regulation and workplace uncertainty tolerance is likely to be negative. Individuals who self-

regulate their emotions will not let uncertainty become fearful at work to the same extent as

those who tend to self-regulate less.

Hypothesis 9: Workplace uncertainty tolerance will be negatively related to self-

regulation.

Adaptive Performance. Adaptive performance is the competency to behave positively to

dynamic job demands at work and perform them well (Jundt et al., 2015). Novel and dynamic

job demands contain greater uncertainty in performing them. The willingness to perform

impromptu job demands with enthusiasm and the ability to sustain motivation in uncertain demands is related to workplace uncertainty tolerance. Uncertainty tolerant individuals will perceive uncertainty as less threatening, be more willing to engage in dynamic job demands, and be more likely to perform them well. Workplace uncertainty tolerant individuals will be more willing to engage and sustain effort in the face of newly presented job demands, which may distally contribute to their adaptive performance over time.

Hypothesis 10: Workplace uncertainty tolerance will be positively related to adaptive performance.

Stress. Stress is the long and short-term change in mental and physical health resulting from performing work (Ganster & Rosen, 2013). People generally perceive uncertainty as stressful, yet this will differ depending on individual workplace uncertainty tolerance. The relationship between workplace uncertainty tolerance and stress is likely to be negative. Uncertainty intolerant individuals will perceive uncertainty as stressful in most work situations, yet uncertainty tolerant individuals will not perceive uncertainty as stressful due to their increased resistance to uncertainty, leading them to experience less stress (Harrison, 1985).

Hypothesis 11: Workplace uncertainty tolerance will be negatively related to stress.

Method

Creating the workplace uncertainty tolerance scale (WUT) was executed in three phases following Hinkin's (1998) recommendations, whereby the goal was to yield results that provide evidence of construct validity, the extent to which the scale measures what it intends to measure (Hinkin, 1998; Nunnally, 1978). The first phase consisted of a deductive item generation and refinement through assessing and establishing content validity. The second phase assessed and specified the latent factor structure, refined the proposed theory, and related the scale to two risk

21

taking propensity scales to establish structural, internal, and convergent validity. The third phase tested the proposed nomological network of the construct to provide evidence for convergent, discriminant, and criterion-related validity.

Hinkin asserts three fundamental aspects of construct validity that this method met (1998). The first is specifying the theoretical domain of the construct; this was done in the proposed scale operationalization section of this paper. The second is to empirically determine the extent to which items measure the domain of the construct; this was accomplished in phases 1 and 2 through the content validation and model evaluation process. The final is to relate the construct to variables of interest that can be predicted by testing theoretical hypotheses. Phases 2 and 3 began to establish criterion, convergent, and discriminant validity of the construct; however, it is beyond the scope of a single paper to fully establish each of these types of validity of a newly proposed construct (Hinkin, 1998).

Phase 1: Item Generation and Assessing Content Validity

Item Generation

A deductive approach was utilized to generate an initial set of items aligned to each of the four sub-domains of the proposed construct. A deductive approach helped ensure the content validity of an initial and final set of items for the construct (Hinkin, 1998). Six industrial and organizational psychology doctoral students and candidates, including the author, were given the written proposed scale operationalization and were briefed on the construct to ensure all item writers had a uniform and comprehensive understanding of the construct. All item writer's questions regarding the construct were answered during the briefing. Each item writer was asked to generate several items that effectively captured each construct's content domain. The recommendations of Hinkin were followed in generating items where items were written to be as

simple in language, short, uniform in perspective, and for a workplace audience (1998). No double-barreled items were generated, and leading items were intentionally avoided. While reversed items have evidence supporting a reduction in insufficient effort responding (Curry et al., 1986; Meade & Craig, 2000), these style items were avoided during the initial item generation due to the potential detrimental effect on the psychometric properties of the created measure (Harrison & McLaughlin, 1991; Hinkin, 1998). The total number of items generated by the group was 77.

The author reviewed the items generated for item writing best practices, redundancy, cognitive load, and conceptual accuracy and omitted 21 items (Hinkin, 1998). The 56 items generated by the group served as the initial battery of items for participants to evaluate in the preliminary content validation. Each of the proposed items generated and their corresponding factors, 14 items each, is found in table 1. Individuals rated all items on a five-point Likert scale with the upper and lower anchors corresponding to "strongly agree" and "strongly disagree," where higher scores indicated greater workplace uncertainty tolerance.

Study 1

A preliminary content validation was performed to gauge the degree to which scale items adequately capture the deduced sample of infinite content associated with the workplace uncertainty tolerance construct (Colquitt et al., 2019; Cronbach, 1990; Nunnally & Bernstein, 1994). Preliminary content validations are recommended in the early stages of scale development to provide evidence of content validity, definitional correspondence, definitional distinctiveness, and an evidence based-criteria for reducing and identifying items that are likely to load onto intended constructs in factor analyses (Andersen & Gerbling, 1991). Definitional correspondence refers to the degree to which a scale's items correspond to the definition of the construct, and

definitional distinctiveness refers to the degree to which a scale's items correspond more to the focal construct's definition than to the definition of orbiting constructs (Colquitt et al., 2019).

Participants

75 participants were recruited through Amazon's Mechanical Turk (MTurk) following the recommendations of Anderson and Gerbling for the sample being lay judges for which the scale is targeted (1991). To combat insufficient effort responding and potential bots, listwise deletion for passing attention checks was used to clean the data, resulting in the sample being refined to 58 participants (Meade & Craig, 2012). While 58 for a sample size may seem small, Hinkin and Tracey recommend a sample size of 50 to be sufficient (1999). Participant requirements included full-time employment, defined as working more than 35 hours per week and over the age of 18, having completed at least 100 tasks through the system, and earning at least 95% approval on those tasks. Participants were paid $1.50 for their participation. The participants were 58.6% male, had an average age of 34.6 years old ($SD = 10.73$), and were 86.2% Caucasian/White (Non-Hispanic), 3.4% African-American/Black, 3.4% Hispanic, 3.4% Asian/Pacific Islander, and 1.7% Native American.

Procedure

The recommendations of Colquitt and colleagues were followed in executing Anderson and Gerbling's content validation approach (2019; 1991). Participants were informed that the goal of the study was to assess survey items used in work psychology research and that it was their task to assess the degree to which each item presented best matches the concept provided. To guide their understanding of the study, they must have passed a practice exercise to familiarize themselves with the purpose and structure of the study. If participants responded to practice items inappropriately, they were shown an error message and asked to reread the

directions and check their answers. Participants were given each item to "drag and drop" into the box associated with the most relevant construct and definition. The 56 items were presented in random order to combat order effects. In addition to the 56 items, four attention check items, one for each construct, were randomly given to participants (e.g., "please sort this item into organizational uncertainty tolerance"). Detailed instructions given to participants are found in appendix B.

Results

Proportions of substantive agreement (PSAs) and coefficients of substantive validity (CSVs) were calculated to assess definitional correspondence and distinctiveness. These statistics are interpreted as the item-level analog of scale-level content validity (Andersen & Gerbling, 1991; Colquitt et al., 2019). PSA and CSV were analyzed within sub-scale dimensions to balance content validity and scale economy. Items in the job task (PSA $\geq$ .88, CSV $\geq$ .79), organizational (PSA $\geq$ .86, CSV $\geq$ .72), peer-interpersonal (PSA $\geq$ .86, CSV $\geq$ .78), and supervisor interpersonal (PSA $\geq$ .90, CSV $\geq$ .83) were retained at these cut-offs. According to Colquitt and colleagues, each of these cut-offs for PSA and CSV indicated "strong" or "very strong" evidence for content validity (2019). The resulting scale contained 24 items, 6 for each sub-scale (see Table 2).

Phase 2: Assessing Factor Structure, Psychometric Properties, and Convergent Validity

Study 2

The purpose of study 2 was to examine the factor structure and psychometric properties of the scale whereby the 24 refined items of the workplace uncertainty tolerance (WUT) scale were given to participants to evaluate. A model selection approach was utilized to determine the optimal number of factors tandemly, considering model fit and parsimony (Fabrigar et al., 1999;

Preacher et al., 2013). Model fit was evaluated by several factor retention criteria or indices of fit (e.g., X^2, RMESA, TLI, CFI) derived from maximum likelihood factor analytic estimation methods. The approach taken was that the simpler model was chosen to emphasize parsimony when a substantial model fit would not be made by including one additional factor to account for the correlations amongst the measured battery of variables (Preacher et al., 2013).

Participants

250 participants were recruited through MTurk. Listwise deletion for passing two attention checks embedded randomly in the survey was used to clean the data for insufficient effort responding, refining the sample to 211 participants. As in study 1, participants must have been employed full-time, over the age of 18, completed at least 100 tasks through the system, and earned at least 95% approval on those tasks. Participants were again paid $1.50 for their participation. The participants were 55.5% female, had an average age of 33.73 (*SD* = 10.06), and were 85.8% Caucasian/White (Non-Hispanic), 5.2% African-American/Black, 4.3% Hispanic, 2.4% Asian/Pacific Islander, and 2.4% Native American. It was a particularly educated sample where 62.5% held bachelor's degrees, and 24.6% held master's degrees. 50.0% of participants reported an average household income of over $60,000 per year.

Procedure

Participants took the study from their personal electronic devices and were first informed that their participation in the study was entirely voluntary and may cease participating at any time. They were informed that their responses to the questions in the study were anonymous and cannot be traced back to them, their workplace, or the researchers of this study. They were also informed that there is no correct answer to these questions and that the research aims to understand their preferences at work. Once participants consented, they responded to the 24

26

items of the WUT in which they were randomly presented. They then responded to the risk

taking propensity scales and various demographic questions about themselves and their current

work arrangement. They were then directed to the researcher's contact information if they had

any additional questions about the study and were notified of their completion.

Measures

Demographics. Participants answered seven demographic questions to provide a

background on their personal and professional lives. Items included measuring age, gender, race,

work industry, company size, and job function. See appendix A for a full item list.

Domain-specific Risk Taking Propensity. Participants responded to two risk-taking

propensity measures, domain-specific and domain-general, to assess convergent validity with

workplace uncertainty tolerance as related to hypothesis 5. Participants provided a rating (1 =

Extremely Unlikely, 7 = *Extremely Likely*) to the 30-item Domain-Specific Risk-Taking (Adult)

Scale (DOSPERT). The DOSPERT measures risk taking propensity in the following decision

domains: ethical (α = .94), financial (α = .90), health/safety (α = .87), recreational (α = .93), and

social (α = .80; Blias & Weber, 2006). An example item included "driving my car without a seat

belt" for the health and safety domain.

Domain-general Risk Taking Propensity. Additionally, participants provided a rating

(1 = *Strongly disagree*, 5 = *Strongly agree*) to the 8-item General Risk Propensity Scale (GRiPS)

to measure unidimensional risk taking propensity (α = .94; Zhang et al., 2018). An example item

included "my friends would say I'm a risk taker."

Results

Descriptive statistics, correlations for study variables, and internal consistencies are

found in table 3. Of note, workplace uncertainty tolerance facets did not significantly correlate

27

with job or organizational tenure, indicating the stability of the construct over time as environmental uncertainty is reduced through tenure. Not being significantly related to tenure also provided evidence for discriminant validity, lack of a survivorship bias in measurement, and the trait-like nature of the construct.

Exploratory Factor Analysis Results

Principal factor investigation methods and analyses were first performed to obtain a baseline understanding of the underlying factor structure, followed by a series of exploratory factor analyses aimed at investigating the number and nature of latent variables that explained the correlations of the 24 items (Fabrigar et al., 1999; Preacher et al., 2013). Exploratory factor analyses were conducted instead of a confirmatory factor analysis due to the new theoretical foundation of the measure specified.

A parallel analysis was conducted using the *psych* package in R. The results suggested that the number of factors explaining the correlations between the items was 5. A generated scree plot suggested that the number of factors was 4 (see Figure 1). Results also yielded 2 eigenvalues over 1 and 4 eigenvalues over .7, indicating somewhere between 2 and 4 underlying factors according to the Kaiser criterion.

A series of exploratory factor analyses were conducted in R using the *psych* package, where maximum likelihood and oblique rotation were specified for all model estimation methods and rotations. Factor analyses were run for two, three, four, five, and six possible factors. The model results of these analyses are found in Table 4. Results indicated wide ranges of model fit from poor fit to exemplary fit, where the RMSEA and CFI statistics ranged from 0.071 and .789 for the two-factor model to 0.026 and .982 for the six-factor model.

However, for all models, items loaded onto factors that were not consistent with the intended factor as specified by the purported theory. Manifest variables did not correlate in a manner suggesting a factor structure reflective of P-E fit theory facets related to hypotheses one, two, three, or four.

Alternative Manifestation of Workplace Uncertainty Tolerance

For the three-factor ($X^2 = 360.97$, $df = 207$, $RMSEA = 0.060$, $RMSR = 0.06$, $TLI = .822$, $CFI = .868$) and four-factor models ($X^2 = 268.81$, $df = 186$, $RMSEA = 0.046$, $RMSR = 0.05$, $TLI = .893$, $CFI = .929$), three distinct latent factors explained the correlations amongst manifest variables. Items loaded onto the distinct factors in a manner that grouped items conceptually inconsistent with the proposed theory of workplace uncertainty tolerance. The content of grouped items was evident of three factors describing tolerance of changing workplace environments, tolerance of unenumerated methods for completing work within organizational environments, and tolerance for coworker interpersonal uncertainty irrespective of formalized organizational distinction.

Contrary to the proposed theory, evidence from the exploratory factor analyses suggested a different theory of workplace uncertainty tolerance comprising three factors indicative of workplace volatility tolerance, ambiguity tolerance, and interpersonal uncertainty tolerance. Therefore hypotheses 1 through 4, that workplace uncertainty tolerance comprises job task, organizational, peer interpersonal, and supervisor interpersonal uncertainty tolerance, were rejected.

Consistent with a model selection approach to avoid under factoring, over factoring, and continuously emphasize parsimony, the three-factor model was determined to be the most favorable model given the factor structure evidence and parsimony. Items that loaded onto each

of the three factors were intuitively similar in item content (e.g., face validity) and designated as workplace volatility, ambiguity, and interpersonal uncertainty tolerance (Table 5). While the four-factor model exhibited a statistically significant better fit ($\Delta X^2 = 92.15$, $p < .000$), the item loadings showed evidence of over factoring (Table 6). Items cross loaded strongly ($\lambda \geq .34$) onto factors three and four, items were conceptually indistinct, and the fourth factor only had two items (PI3, SI10) that loaded onto it in a moderate or strong capacity. These observations provided evidence for an unstable or potentially weak fourth factor, leading to selecting the three-factor model (Costello & Osborne, 2005).

Theory Refinement

The results of study 2 provided evidence supporting the macro theory of workplace uncertainty tolerance, and it remained unchanged in impetus or theory yet suggested an alternative composition of its factors. Volatility tolerance emerged as an unexpected yet distinct factor and is defined as the individual-level degree of preference for consistency, predictability, and stability in one's organizational environment. Volatility tolerant individuals are less concerned with workplace change, whereas volatility intolerant individuals will exhibit a greater aversion to change within their work environment. The results also suggested that individuals do not significantly differentiate between experiencing uncertainty in their job tasks and navigating their organizational environment. Job task and organizational uncertainty tolerance were not shown to be mutually exclusive in how participants experienced uncertainty in these domains. It may be that navigating organizational environments are central to the tasks of many jobs (e.g., managers). Given this realization, ambiguity tolerance is defined as the individual-level degree for preference of clarity, direction, and structure for completing work. Interpersonal uncertainty tolerance remained unchanged in definition, the individual-level degree for preference of

structured and predictable social interactions between a person and their work peers, but is refined to be relationship general to not differentiate between the organizational distinction of coworkers.

> *Refined hypothesis 1:* Volatility tolerance will emerge as a factor for workplace uncertainty tolerance.
>
> *Refined hypothesis 2:* Ambiguity tolerance will emerge as a factor for workplace uncertainty tolerance.
>
> *Refined hypothesis 3:* Interpersonal uncertainty tolerance will emerge as a factor for workplace uncertainty tolerance.

These three hypotheses were tested in study 2 in place of the original first four hypotheses proposed to test hypotheses 5 through 11, given the alternative manifestation of the construct. All hypotheses, their proposed valence between variables, and underlying theoretical rationale remained the same.

Scale Refinement

Given the new conceptualization given the results thus far, several steps were taken to scrub and adapt the battery of items for conceptual accuracy, scale economy and balance, and improvement of psychometric properties. Two items were eliminated on the grounds that they did not provide strong evidence of loading onto any of the three factors (SI9, SI10). Two items were eliminated based on the evidence of cross-loading onto multiple factors (SI7, SI13). Several items were eliminated based on relatively weak factor loadings or potential evidence for cross-loading onto multiple factors (JT3, O1, PI4). Two items were eliminated due to conceptual inconsistency and scale economy for evidence of the factor having better performing items (PI3,

SI12). Several items were eliminated for scale economy due to the factor having better performing items (JT9, O7, O8).

Another factor analysis was performed to analyze the refined 3-factor model containing 12 items, 4 items for each evident factor (Table 7). The results of the refined 3 factor model provided evidence of substantial model fit with along with a parsimonious solution to understanding the construct ($X^2 = 46.46$, $df = 33$, $RMSEA = 0.04$, $RMSR = 0.04$, TLI = .940, CFI = .971). The three factors cumulatively accounted for 40% of the variance in the model. At the factor level, volatility tolerance correlated with ambiguity tolerance at $r = .24$ and with interpersonal uncertainty tolerance at $r = .35$, while ambiguity tolerance and interpersonal uncertainty tolerance are correlated at $r = .24$. Overall, factors were correlated at levels that suggest three independent factors comprising the higher-order workplace uncertainty tolerance construct.

Assessing Convergent Validity with Risk Taking Propensity

The 12-item WUT exhibited evidence of convergent validity consistent with the theory set forth that risk taking propensity and workplace uncertainty tolerance are fundamentally positively correlated in theory and measurement. The subscales of volatility tolerance ($r = .48$, $p < .000$), ambiguity tolerance ($r = .39$, $p < .000$) and interpersonal uncertainty tolerance ($r = .17$, $p = .01$) all significantly correlated with domain-general risk taking propensity. The same positive pattern was also exhibited for all domains of the DOSPERT for volatility and ambiguity tolerance. Volatility and ambiguity tolerance were significantly correlated with all facets of the DOSPERT (see Table 3). Interpersonal uncertainty tolerance was significantly correlated to the facets of social, recreational, and financial risk taking propensity but not significantly correlated

with health/safety or ethical risk taking propensity. Hypothesis 5, that risk taking propensity will be positively related to workplace uncertainty tolerance, is generally supported.

Phase 3: Confirming Factor Structure and Assessing Convergent, Discriminant, and Criterion-related Validity

The purpose of phase three was to further test the factor structure decided upon in study 2 and to relate the WUT scale to other pertinent variables in the industrial and organizational psychology literature to provide preliminary evidence for convergent, discriminant, and criterion-related validity.

Study 3

Participants

300 participants were again recruited through MTurk. Listwise deletion for passing three attention checks embedded randomly in the survey was used to clean the data for insufficient effort responding, refining the sample to 241 participants. As in studies 1 and 2, participants must have been employed full-time, over the age of 18, completed at least 100 tasks through the system, and earned at least 95% approval on those tasks. Participants were again paid $1.50 for their participation. The participants were 53.5% male, had an average age of 33.16 ($SD = 9.53$), and were 85.5% Caucasian/White (Non-Hispanic), 4.1% African-American/Black, 2.8% Hispanic, 4.9% Asian/Pacific Islander, and 2.5% Native American. Again, it was a particularly educated sample where 67.6% held bachelor's degrees, and 19.9% held master's degrees. 44.0% of participants reported an average household income of over $60,000 per year.

Procedure

Participants took the third study from their personal electronic devices and were first informed that their participation in the study was entirely voluntary and may cease participating

at any time. They were informed that their responses to the questions in the study were anonymous and cannot be traced back to them, their workplace, or the researchers of this study. They were also informed that there is no correct answer to these questions and that the research aims to understand their preferences at work. Once participants consented to participate, they responded to the 12 items of the WUT in which they were present randomly. They then responded to the risk-taking propensity scales, the various other measures related to the proposed nomological network, and finally to demographic questions. They were then directed to the researcher's contact information if they had any additional questions about the study and were notified of their completion

Measures

Demographics. The same seven demographic questions that participants answered in study 2 were used in study 3 to provide personal and professional background on participants.

Risk taking Propensity. Both the DOSPERT (see Table 10 for reliability coefficients) and the GRiPS (α = .94) were again utilized to assess risk taking propensity (Blias & Weber, 2006; Zhang et al., 2018)

Optimism. Optimism was measured using the 10-item Life Orientation Test-Revised (α = .54.; LOT-R; Scheier et al., 1994). Participants responded to questions on a four-point Likert scale (1 = *Strongly disagree*, 4 = *Strongly agree*). An example item included, "In uncertain times, I usually expect the best."

Tenacity. Participants responded to five items (1 = *Strongly disagree*, 5 = *Strongly agree*) to assess their tenacity (α = .68; Baum & Locke, 2004). An example item from the scale included, "I continue to work hard on tasks even when others oppose me."

Feedback-seeking. Participants responded to four items (1 = *Never*, 4 = *Always*) modified from Ashford & Black's scale to measure proactive feedback-seeking behaviors (α = .72; 1996). An example item included "To what extent have you sought feedback about your performance after completing assignments."

Self-regulation. Participants responded (1 = *Strongly disagree*, 5 = *Strongly agree*) to the 6-item Desire for Self-Control scale to measure their self-regulation (α = .75; DSC; Uziel & Baumeister, 2017). An example item included, "I wish I had more control over my responses in stressing situations."

Adaptive Performance. Participants responded (1 = *Strongly disagree*, 7 = *Strongly agree*) to the 19-item Original Scale for Adaptive Performance to assess their adaptive performance in the dimensions of creativity (α = .62), reactivity in the face of emergencies (α = .75), interpersonal adaptability (α = .81), training effort (α = .78), and handling work stress (α = .78; Charbonnier-Voirin & Roussel, 2012). An example item included, "I develop new tools and methods to resolve new problems."

Stress. Participants responded to (1 = *Strongly disagree*, 5 = *Strongly agree*) the twelve-item Job Stress Index to assess their job stress (α = .95; JSI; Bernas & Major, 2000). An example item included "I feel I cannot work long enough or hard enough."

Confirmatory Factor Analysis Results

Descriptive statistics and correlations for WUT items are found in table 8. A factor analysis was conducted to confirm the factor structure settled upon in phase 2 and to test refined hypotheses 1, 2, and 3. Maximum likelihood estimation method with oblique rotation was performed. The results provided evidence of a good model fit (X^2 = 43.82, *df* = 33, *RMSEA* = 0.04, *RMSR* = 0.03, TLI = .968 CFI = .984) where manifest variables loaded well onto intended

factors as specified (Table 9). The three factors cumulatively accounted for 43% of the variance in the model. At the factor level, volatility tolerance correlated with ambiguity tolerance at $r = .22$ and interpersonal uncertainty tolerance at $r = .54$, while ambiguity tolerance and interpersonal uncertainty tolerance correlated at $r = .03$. Refined hypotheses 1, 2, and 3, that workplace uncertainty tolerance is comprised of volatility, ambiguity, and interpersonal uncertainty tolerance, were supported.

Exploratory Demographic Analyses

A series of exploratory analyses were conducted to explore potential sampling, demographically confounding, or survivorship effects in the creation of the WUT specifically examining its relationship between age, gender, income, education, job tenure, and organizational tenure.

Age. Volatility tolerance ($r = -.03, p = .659$), ambiguity tolerance ($r = -.06, p = .374$), and interpersonal uncertainty tolerance ($r = .08, p = .217$) were not significantly related to age. The results indicated that age does not correlate with workplace uncertainty tolerance supporting the stable, trait-like nature of the construct.

Gender. Volatility tolerance ($r = .00, p = .659$), ambiguity tolerance ($r = .03, p = .687$), and interpersonal uncertainty tolerance ($r = -.01, p = .921$) were not significantly related to gender. There was no observed relationship between workplace uncertainty tolerance and gender.

Education. Volatility tolerance ($r = .26, p < .000$) and ambiguity tolerance ($r = .21, p = .001$) exhibited positive relationships with education while interpersonal uncertainty tolerance ($r = -.01, p = .842$) did not. The results indicated that educated individuals tend to be more tolerant of volatility and ambiguity.

Income. Volatility tolerance ($r = .09$, $p = .164$) and interpersonal uncertainty tolerance ($r = -.09$, $p = .175$) had no relationship with income, yet ambiguity tolerance ($r = -.15$, $p = .021$) exhibited a negative relationship with income. The results indicated that higher earning individuals tend to exhibit less tolerance for ambiguity.

Job Tenure. Volatility tolerance ($r = -.02$, $p = .759$), ambiguity tolerance ($r = -.07$, $p = .302$), and interpersonal uncertainty tolerance ($r = .10$, $p = .133$) were not significantly related to job tenure. The results indicated that workplace uncertainty tolerance does not correlate with job tenure, supporting that the validation of the WUT was not confounded in measurement by a survivorship bias for job tenure.

Organizational Tenure. Volatility tolerance ($r = -.04$, $p = .538$) and interpersonal uncertainty tolerance ($r = .09$, $p = .168$) were not significantly related to organizational tenure, yet ambiguity tolerance ($r = -.14$, $p = .034$) negatively correlated with organizational tenure. The results indicated that volatility and interpersonal uncertainty tolerance do not correlate with organizational tenure, supporting that the validation of the WUT was not confounded in measurement by a survivorship bias, yet does indicate that as individuals stay with the same organization, they tend to be less tolerant of ambiguity.

Results Assessing the Proposed Nomological Network

Descriptive statistics, correlations for study variables, and internal consistencies are found in table 10. The hypotheses related to the proposed nomological network were tested by analyzing Pearson's product-moment correlation and making inferences from the correlation's 95% confidence intervals.

Domain-general Risk Taking Propensity. Volatility tolerance ($r = .43$, $p < .000$), and ambiguity tolerance ($r = .43$, $p < .000$) were positively related to domain-general risk taking

propensity, yet interpersonal uncertainty tolerance was not significantly related to domain-general risk taking propensity ($r = .10$, $p = .133$). Hypothesis 5, that workplace uncertainty tolerance is positively related to risk taking propensity, was partially supported.

Domain-specific Risk Taking Propensity.

Social Risk Taking Propensity. Volatility tolerance ($r = .30$, $p < .000$), ambiguity tolerance ($r = .26$, $p < .000$), and interpersonal uncertainty tolerance ($r = .33$, $p < .000$), were positively related to social risk taking propensity.

Recreational Risk Taking Propensity. Volatility tolerance ($r = .33$, $p < .000$), ambiguity tolerance ($r = .46$, $p < .000$), and interpersonal uncertainty tolerance ($r = .18$, $p = .006$), were positively related to recreational risk taking propensity.

Financial Risk Taking Propensity. Volatility tolerance ($r = .42$, $p < .000$), ambiguity tolerance ($r = .45$, $p < .000$), and interpersonal uncertainty tolerance ($r = .15$, $p = .018$), were positively related to financial risk taking propensity.

Health/safety Risk Taking Propensity. Volatility tolerance ($r = .13$, $p = .051$) nor interpersonal uncertainty tolerance ($r = -.03$, $p = .611$) were significantly related to health/safety risk taking propensity, yet ambiguity tolerance ($r = .50$, $p < .000$) was positively related to health/safety risk taking propensity.

Ethical Risk Taking Propensity. Interpersonal uncertainty tolerance ($r = .01$, $p = .885$) was not significantly related to ethical risk taking propensity, yet volatility tolerance ($r = .18$, $p = .004$) and ambiguity tolerance ($r = .51$ $p < .000$) were positively related to ethical risk taking propensity.

Hypothesis 5, that workplace uncertainty tolerance is positively related to risk taking propensity, was partially supported.

Optimism. Volatility tolerance ($r = .50$, $p < .000$), ambiguity tolerance ($r = .31$, $p <$ .000), and interpersonal uncertainty tolerance ($r = .47$, $p < .000$), were positively related to optimism. Hypothesis 6, that workplace uncertainty tolerance is positively related to optimism, was supported.

Tenacity. Volatility tolerance ($r = .51$, $p < .000$) and interpersonal uncertainty tolerance ($r = .57$, $p < .000$) were positively related to tenacity, yet ambiguity tolerance ($r = .05$, $p = .450$) was not significantly related to tenacity. Hypothesis 7, that workplace uncertainty tolerance is positively related to tenacity, was partially supported.

Feedback-seeking. Volatility tolerance ($r = .48$, $p < .000$), ambiguity tolerance ($r = .27$, $p < .000$), and interpersonal uncertainty tolerance ($r = .35$, $p < .000$), were positively related to feedback seeking behaviors. Hypothesis 8, that workplace uncertainty tolerance is negatively related to feedback-seeking behaviors, was rejected. .

Self-regulation. Volatility tolerance ($r = .25$, $p < .000$), ambiguity tolerance ($r = .24$, $p <$ .000), and interpersonal uncertainty tolerance ($r = .41$, $p < .000$), were positively related to self-regulation. Hypothesis 9, that workplace uncertainty tolerance is negatively related to self-regulation, was rejected.

Adaptive Performance.

Adaptive Performance: Creativity. Volatility tolerance ($r = .47$, $p < .000$), ambiguity tolerance ($r = .18$, $p = .004$), and interpersonal uncertainty tolerance ($r = .41$, $p < .000$), were positively related to adaptive performance-creativity.

Adaptive Performance: Reactivity in the Face of Emergencies. Volatility tolerance ($r =$ .47, $p < .000$) and interpersonal uncertainty tolerance ($r = .44$, $p < .000$) were positively related to adaptive performance-reactivity in the face of emergencies, yet ambiguity tolerance ($r = -.01$,

39

p = .888) was not significantly related to adaptive performance-reactivity in the face of emergencies.

Adaptive Performance: Interpersonal Adaptability. Volatility tolerance (r = .51, p < .000) and interpersonal uncertainty tolerance (r = .55, p < .000) were positively related to adaptive performance-interpersonal adaptability, yet ambiguity tolerance (r = .01, p = .921) was not significantly related to adaptive performance-interpersonal adaptability.

Adaptive Performance: Training Effort. Volatility tolerance (r = .57, p < .000), ambiguity tolerance (r = .13, p = .0499), and interpersonal uncertainty tolerance (r = .46, p < .000), were positively related to adaptive performance-training effort.

Adaptive Performance: Handling Work Stress. Volatility tolerance (r = .42, p < .000) and interpersonal uncertainty tolerance (r = .38, p < .000) were positively related to adaptive performance-handling stress, yet ambiguity tolerance (r = .06, p = .332) was not significantly related to adaptive performance-handling stress. Hypothesis 10, that workplace uncertainty tolerance is positively related to adaptive performance, was partially supported.

Stress. Volatility tolerance (r = -.04, p = .517) nor interpersonal uncertainty tolerance (r = -.04, p = .611) was significantly related to stress, yet ambiguity tolerance (r = .47, p < .000) was positively related to stress. Hypothesis 11, that workplace uncertainty tolerance is negatively related to stress, was rejected.

Study 3 Discussion

Table 11 summarizes all relationships for the workplace uncertainty tolerance's inaugural nomological network. The exploratory analyses indicated that age and gender do not covary with workplace uncertainty tolerance, indicating that the measure's development was not likely confounded by age or gender effects. Results indicated that educated individuals tended to be

more tolerant of volatility and ambiguity, while higher-income earners tended to be less tolerant of ambiguity in their work. Subsequent studies should continue to monitor the relationships between education and income and how they may affect workplace uncertainty tolerance measurement and not form a composite from the two variables to use as a proxy for socioeconomic status.

Five of the six tests assessing workplace uncertainty tolerance facets and job and organizational tenure found no significant relationship, indicating the stability of the construct over time and a lack of a survivorship bias of natural organizational attrition. Not being related to tenure also provided evidence for discriminant validity and the trait-like nature of the construct. Only ambiguity tolerance was shown to be significantly and negatively related to organizational tenure, indicating that as one stays with their organization, they tend to be less tolerant of ambiguity. One plausible explanation could be that as individuals naturally reduce their organization uncertainty through tenure, they tend to view the ambiguity left in their environment as more threatening and are more averse to it, given the relative stability of being part of an organization for a significant amount of time.

Regarding the proposed nomological network, hypothesis 5, that workplace uncertainty tolerance and risk taking propensity are positively related, was generally supported, yet it is likely domain-specific in nature. While the volatility and ambiguity facets of workplace uncertainty tolerance and domain-general risk taking propensity were significantly related, interpersonal uncertainty tolerance exhibited no significant relationship. Interpersonal uncertainty tolerance was only significantly related to social, recreational, and financial risk taking propensity providing evidence for the domain-specific nature of the relationship between workplace uncertainty tolerance and risk taking propensity. Even though all significant

41

relationships between workplace uncertainty tolerance and risk taking propensity were positive in direction, providing evidence for convergent validity, the nature of the relationship tended to exhibit domain-specific tendencies.

Results showed that all relationships between the WUT and optimism were positive, indicating support for the rationale that uncertainty-tolerant individuals are more likely to engage in risk at work in the hope that it will yield positive results.

For tenacity, only the volatility and interpersonal uncertainty tolerance facets were significantly related in the positive direction. The results supported the rationale that tenacious individuals will be less likely to allow for uncertainty to prevent goal attainment, yet this may be specifically due to persistency in changing workplace environments and interpersonal obstacles (i.e., volatility and interpersonal uncertainty tolerance).

Contrary to the proposed hypothesis, feedback-seeking behaviors and workplace uncertainty tolerance exhibited significant relationships in the opposite hypothesized direction. Each of the facets of the WUT were positively related to feedback-seeking behaviors suggesting a different rationale for their relationships. It may be plausible that uncertainty tolerant individuals tend not to fear the performance appraisal or interpersonal risk inherent in the feedback process to the same extent as uncertainty intolerant individuals and, therefore, engage in greater feedback-seeking behaviors.

Similarly, results provided evidence for a contradictory explanation for the positive relationships between the facets of workplace uncertainty tolerance and self-regulation. The positive relationship observed suggested that those who are workplace uncertainty tolerant tend to cope better and manage uncertainty's natural apprehension leading to more self-regulation and a more stable psychological state in the face of uncertainty.

As for adaptive performance, the results provided compelling evidence to support the construct's presence in predicting adaptive performance that is domain-specific. While volatility tolerance and interpersonal uncertainty tolerance were significantly related to all aspects of adaptive performance, ambiguity tolerance was only related to the creativity and training effort dimensions. Subsequent research should be conducted using more rigorous measures of adaptive performance beyond self-report. However, the evidence suggested that workplace uncertainty tolerance may have a significant role in predicting adaptive performance.

For stress, neither volatility tolerance nor interpersonal uncertainty tolerance were related to stress, yet ambiguity tolerance was positively related to stress contradicting the hypothesized relationship. The positive relationships between ambiguity tolerance and stress and ambiguity tolerance and health/safety risk taking propensity ($r = .50, p < .000$) suggested a paradox contradicting the existing rationale that ambiguity tolerant individuals experience less stress in the face of uncertainty. Those who are ambiguity tolerant tend to proceed in performing work without direction, leading them to be riskier in their well-being decision making and behavior and, therefore, are more likely to incur unfavorable outcomes contributing to their elevated stress over time. More research is needed to explore the nature of the facets of the WUT with stress and other well-being outcomes.

General Discussion

The purpose of this dissertation was to contribute to the greater body of knowledge of the industrial and organizational psychology scientific literature by undertaking an investigation into the unknown. This work specified an empirically grounded theory for workplace uncertainty and created a scale for measuring the trait of workplace uncertainty tolerance. The results yielded from these studies provide evidence of a theory of workplace uncertainty grounded in human

experience distinguishing between three types of workplace uncertainty: volatility, ambiguity, and interpersonal.

While the initially proposed theory of workplace uncertainty was founded to be unsupported, the results provided a foundation for an alternative theory and framework for understanding workplace uncertainty derived from human experiences with it. The results from these studies demonstrated that people do not experience uncertainty at work in the way industrial and organizational psychologists compartmentalize facets of work as reflected by P-E fit theory. Human experience regarding uncertainty is not composed of the environmental origin of uncertainty (e.g., task, supervisor) but rather by the type of uncertainty (e.g., volatility, ambiguity), they are experiencing.

The second goal of creating a psychological scale to measure workplace uncertainty tolerance was also accomplished. The three phases of the method for creating the WUT were intended to mirror Hinkin's three recommendations for scale development: theoretical domain specification, determination of the extent to which items measure the domain of the construct, and relating variables of interest through testing theoretical hypotheses (1998). The theoretical domain for workplace uncertainty tolerance was supported and remained the same; however, the empirical evidence suggested an alternative composition of factors. Providing evidence for construct validity and items effectively measuring the construct's domain was done throughout phases 1-3 of this paper, and a more detailed discussion of construct validity follows. Providing evidence for relating the construct to variables of interest began in phase 3, yet it is beyond the scope of a dissertation to comprehensively investigate a construct's nomological network.

Construct Validity of the Workplace Uncertainty Tolerance Scale

The goal of the method for creating the WUT was to establish construct validity. While the composition of the WUT changed during the exploratory factor analysis of phase 2, the subsequent results provided ample evidence of construct validity. To be diligent in specifying evidence for each type of validity comprising construct validity, each aspect of construct validity of the WUT is discussed in the following sections.

Content Validity

The content validation conducted in phase 1 was grounded in the purported theory that was unsupported. While the results of the content validation provided satisfactory results for the unsupported theory, it does not provide evidence of content validity given the alternative composition of the WUT (i.e., three factors of volatility, ambiguity, and interpersonal uncertainty tolerance). However, even with the content validation and item reduction being performed under a different theoretical foundation, the strength of the underlying three factors disrupting the purported a priori theory was undeniable. Each latent variable grouped and explained the correlations amongst items that were conceptually consistent with the three resultant factors. The conceptual item groups provided evidence for content validity that was upheld in the confirmatory factor analysis in phase 3.

Structural and Internal Validity

The structural validity of the WUT was supported through the model evaluation process that took place in phases 2 and 3 of the method. Contrary to the purported theory, three clear empirically grounded factors emerged, as evidenced by the statistical model's satisfactory fit. Further investigations should be done to reaffirm the factor structure of the WUT. Due to the construct's domain-specific tendencies, meaning is best derived from scores at the sub-scale level. It is not recommended that meaning be derived from a composite score of the three sub-

scales. As for internal validity, sub-scales in both studies were assessed for reliability, which was shown to be adequate, and provided evidence of internal validity and consistency.

Convergent and Discriminant Validity

All facets of the WUT were significantly related to risk taking propensity, domain-general or specific, that conceptually aligned with each factor. Following the theory of workplace uncertainty, the two constructs of risk taking propensity and uncertainty tolerance are married to one another in theory and should be too in measurement. The positive relationship between the two constructs in theory and observed in measurement within these studies provide evidence of convergent validity of the WUT. The positive relationships between workplace uncertainty tolerance and optimism and tenacity also provide evidence of convergent validity of the measure due to those relationships being theoretically and empirically related to one another.

Furthermore, the results suggested that the WUT was not significantly correlated with job or organizational tenure except for a single statistical test. These tests provided evidence for discriminant validity and the trait-like nature of the construct. The WUT not varying with job or organizational tenure also provided evidence of the absence of survivorship effects.

Criterion-related and Predictive Validity

The results of phase 3 provided evidence of criterion-related validity within the industrial and organizational psychology field and predictive validity for other variables in the broader psychological literature. The significant relationships between adaptive performance and the sub-scales of the WUT are of particular interest. Using workplace uncertainty tolerance to predict performance in jobs has the potential to lead to a greater understanding of what traits set humans up for success at work with the expansion of the performance domain to include adaptive

performance (Borman, 1992; Jundt et al., 2015) Subsequent studies should continue to explore the relationship between adaptive performance and workplace uncertainty tolerance.

Stress also exhibited a significant and positive relationship with ambiguity tolerance. While this was in the opposite direction hypothesized, more research should continue to explore the relationship between ambiguity tolerance and stress and other well-being outcomes. People's sustainability at work will continue to receive scientific and practitioner attention, and taking into account workplace uncertainty tolerance may aid in understanding the dynamics of what predicts well-being in specific work environments.

External Validity

Using three samples of working adults in the construction of the WUT provides evidence for external validity and generalization of the WUT to be used for other working samples. The WUT should extend to all working populations with the potential exception of deskless workers, where further validation is needed when using this scale with a deskless working population (i.e., blue-collar). The samples were comprised of educated MTurkers, which may be unrepresentative if one desires to use the scale for a deskless worker population. Deskless workers' experiences with workplace uncertainty may be fundamentally different, given that their work may naturally contain more procedural clarity than their desk-based, knowledge-worker counterparts (Park 2021).

Implications for Theory

Uncertainty is a ubiquitous aspect of the work experience and underlies many workplace decisions and behaviors. Putting scientific effort into investigating uncertainty and its effects on workplace phenomena advances our understanding of organizational behavior. Establishing a framework for classifying workplace uncertainties provides a theoretical underpinning for

understanding workplace uncertainty's nature and how it manifests across environments. Conceptualizing a construct and developing a scale to measure workplace uncertainty tolerance increases scientific understanding of how individuals fit into workplaces and why some work environments may be better for some. Workplace uncertainty tolerance is not inherently desirable or undesirable but aims to provide insights into why particular individuals prefer and fit better into workplaces of variable degrees of uncertainty. There are several lines of research areas that this dissertation theoretically advances the understanding of within decision science and industrial and organizational psychology.

Grounding the WUT in judgment and decision making theory helps bridge the gap between two traditionally siloed research areas of psychology (e.g., judgment and decision making, industrial and organizational) and is a response to the call to action for industrial and organizational psychology to treat workplace decision making with vigor (Dalal et al., 2010). Integration and utilization of judgment and decision making theories in workplace psychology help drive a deeper understanding of workplace phenomena. The creation of the WUT is a deliberate effort to close this gap by providing industrial and organizational psychology researchers a tangible means to study judgment and decision making concepts in the workplace.

Subsequent research should emphasize risk as a necessary part of the theory and be used in tandem whenever examining workplace uncertainty (McLain et al., 2015). Examining uncertainty without examining risk in theory or empirical efforts is a deficiency of theory and measurement. Ensuing research will be necessary to provide adequate evidence of construct validity of the WUT (Hinkin, 1998). Future research should continue to utilize the WUT to investigate how it is related to other workplace variables of importance, either by considering it as a proximal or distal variable to establish further construct validity of the measure.

Longitudinal research investigating workplace uncertainty tolerance over a career will also be essential to understand due to evidence suggesting it may vary over job and organizational tenures and across the lifespan (Dohmen et al., 2018).

Another area to help advance the utility of the WUT is to create a scale to measure uncertainty in workplace environments. Similar to how the Position Classification Inventory (Gottfredson & Holland, 1991) measures RIASEC facets in workplace environments, it would be immensely advantageous to have a similar instrument to measure uncertainty in jobs and, more broadly, work environments. Assessing congruence of workplace uncertainty tolerance and workplace environmental uncertainty will allow for a mathematical means to evaluate congruence between the person and the environment through difference scores, congruence indices, or advanced statistical techniques (e.g., polynomial regression; Edwards & Parry, 1993). Providing computational scores of congruence between workplace uncertainty tolerance and workplace environmental uncertainty can provide the means to investigate more sophisticated worthwhile research questions beyond the scope of a single scale. Research inquiring into the performance and well-being of individuals based on the congruence between their workplace uncertainty tolerance and the uncertainty present in their work environments would be a potentially fruitful area for allocating scientific efforts based on previous findings (Kristof-Brown et al., 2005).

Implications for Practice

The best theories advance understanding and have effective utility in practice (Lewin, 1943). Industrial and organizational psychology practitioners can utilize the creation of the workplace uncertainty tolerance construct and WUT in many human resource management functions, strategic talent management, and organizational effectiveness.

The immediate utility of the WUT will increase the understanding of how people function in work environments, given their scores on these subscales. The WUT can improve better coaching, managerial leadership, team cohesion, well-being, performance, and, to a greater extent, organizational effectiveness. Managers will understand how to lead team members more effectively (e.g., some team members may need more direction and structure in tasks, and some may prefer casual social encounters to know their team members better). Research in the newcomer socialization literature suggests that individuals will not seek new information in environments uniformly (Morrison, 1993). Workplace uncertainty tolerance provides insight into why individuals differ in their information seeking and may provide predictiveness for which individual newcomer socialization programs will be most effective (e.g., uncertainty intolerant individuals). Onboarding and newcomer socialization programs may be more effective when programs account for workplace uncertainty tolerance.

More research should be conducted before utilizing the WUT in high-stakes decision making. However, the WUT has the potential to be used in a selection battery to match applicants with appropriate work environments given the evidence provided here, with the construct being related to adaptive performance. One of the underlying theoretical purposes of personnel selection is to predict which applicants will fit into an organization's environment (Ryan & Ployhart, 2014). Workplace uncertainty tolerance may help this endeavor for many organizations. Utilizing the WUT may also be particularly useful for industries where uncertain work environments are more commonly found. For example, assembly-line jobs, and more broadly, deskless jobs, have much less uncertainty associated with their environment than working as an academic focusing on research (Park, 2021). How to perform and navigate their environments will be less uncertain for the assembly line technician than the academic.

Practical benefits of the WUT extend beyond for-profit organizations. Academic advisors can better mentor their students in academia if they understand how they function under uncertainty. Students admitted into graduate programs have the general mental ability to do the work and are generally conscientious, yet research shows that cognitive ability loses its predictive utility after the first year of graduate school. There must be other non-cognitive factors that explain success. One explanation could be workplace uncertainty tolerance, given the shift of the nature of work from undergraduate and first-year graduate courses to subsequent years in graduate school. The work shifts from structured course work to ambiguous research and internship demands (e.g., from the step-by-step syllabus direction to achieve an A versus "come up with a research proposal").

Conclusion

Uncertainty is fundamental, persisting, and often perceived to be proliferating within our lives. Pursuing a greater understanding of uncertainty provides a better understanding of who we are and how we function. This research on workplace uncertainty is a beginning, not an end. The theory should continue to be developed and refined, and the WUT should continue to be put through more rigorous testing to evaluate scientific and practical utility. Nevertheless, this research has provided a foundation for future research to build upon that will be monetarily, pragmatically, and scientifically worthwhile.

References

Acosta, J. S., & Franco-Watkins, A. M. (2021). Better the devil you know than the one you don't: Uncertainty aversion in job choice. Society of Industrial and Organizational Psychology 2021 Annual Convention, New Orleans, LA, United States.

Anderson, C., & Galinsky, A. D. (2006). Power, optimism, and risk-taking. *European Journal of Social Psychology, 36*(4), 511-536.

Anderson, J. C., & Gerbing, D. W. (1991). Predicting the performance of measures in a confirmatory factor analysis with a pretest of assessment of their substantive validities. *Journal of Applied Psychology, 76*(5), 732-740.

Allen, D. G., Bryant, P. C., & Vardaman, J. M. (2010). Retaining talent: Replacing misconceptions with evidence-based strategies. *Academy of Management Perspectives*, 48-64.

Aguinis, H., Villamor, I., & Ramani, R. S. (2021). Mturk research: Review and recommendations. *Journal of Management, 47*(4), 823-837.

Aguinis, H., Joo, H., & Gottfredson, R. K. (2013). What monetary rewards can and cannot do: How to show employees the money. *Business Horizons, 56*, 241-249.

Ashford, S. J., & Black, J. S. (1996). Proactivity during organization entry: The role of desire for control. *Journal of Applied Psychology, 81*(2), 199-214.

Ashford, S. J., & Cummings, L. L. (1985). Proactive feedback-seeking: The instrumental use of the information environment. *Journal of Occupational Psychology, 58*(1), 67-79.

Ashford, S. J., De Stobbeleir, K., & Nujella, M. (2016). To seek or not to seek: Is that the only question? Recent developments in feedback-seeking literature. *Annual Review of Organizational Psychology and Organizational Behavior, 3*, 213-239.

Azri, B. (2011). Job satisfaction: A literature review. *Management Research and Practice, 3*(4), 77-86.

Bangerter, A., Roulin, N., & König, C. J. (2012). Personnel selection as a signaling game. *Journal of Applied Psychology, 97*(4), 719.

Barley, S., Bechky, B. A., & Milliken, F. J. (2017). The changing nature of work: Careers, identities, and work lives in the 21st century. *Academy of Management Discoveries, 3*(2), 111-115.

Baum, J. R., & Locke, E. A. (2004). The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth. *Journal of Applied Psychology, 89*(4), 587.

Bauer, T. N., Bodner, T., Erdogan, B., Truxillo, D. M., & Tucker, J. S. (2007). Newcomer adjustment during organizational socialization: a meta-analytic review of antecedents, outcomes, and methods. *Journal of Applied Psychology, 92*(3), 707.

Berger, C. R. (1979). Beyond initial interactions. In H. Giles & R. St. Clair (Eds.), *Language and Social Psychology*. Oxford: Basil Blackwell.

Berger, C. R., & Calabrese, R. (1975). Some explorations in initial interactions and beyond: Towards a developmental theory of interpersonal communication. *Human Communication Research, 1*, 99-112.

Blais, A. & Weber, E. U. (2006). A domain-specific risk-taking (DOSPERT) scale for adult populations. *Judgment and Decision Making, 1*(1), 33-47.

Borman, W. C. (1991). Job behavior, performance, and effectiveness. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology* (pp. 271–326). Consulting Psychologists Press.

Boroff, K. E., & Lewin, D. (1997). Loyalty, voice, and intent to exit a union firm: A conceptual and empirical analysis. *Industrial and Labor Relations Review, 51*(1), 50-63.

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology, 53*(1), 371-399.

Budner, S. N. Y. (1962). Intolerance of ambiguity as a personality variable. *Journal of Personality, 30*(1), 29-50.

Cabantous, L. (2007). Ambiguity aversion in the field of insurance: Insurers' attitude to imprecise and conflicting probability estimates. *Theory and Decision, 62*(3), 219-240.

Cable, D. M., & DeRue, D. S. (2002). The convergent and discriminant validity of subjective fit perceptions. *Journal of Applied Psychology, 87*(5), 875.

Cable, D. M., & Edwards, J. R. (2004). Complementary and Supplementary Fit: A Theoretical and Empirical Integration. *Journal of Applied Psychology, 89*(5), 822–834.

Cable, D. M., & Judge, T. A. (1994). Pay preferences and job search decisions: A person-organization fit perspective. *Personnel Psychology, 47*(2), 317-348.

Cable, D. M., & Judge, T. A. (1994). Person-organization fit, job choice decisions, and organizational entry. *Organizational Behavior and Human Decision Processes, 67*(3), 294-311.

Carleton, R. N., Norton, M. P. J., & Asmundson, G. J. (2007). Fearing the unknown: A short version of the Intolerance of Uncertainty Scale. *Journal of Anxiety Disorders, 21*(1), 105-117.

Carver, C. S., Scheier, M. F., & Segerstrom, S. C. (2010). Optimism. *Clinical Psychology Review, 30*(7), 879-889.

Cascio, W. F., & Montealegre, R. (2016). How technology is changing work and organizations. *Annual Review of Organizational Psychology and Organizational Behavior, 3*, 349-375.

Charbonnier-Voirin, A., & Roussel, P. (2012). Adaptive performance: A new scale to measure individual performance in organizations. *Canadian Journal of Administrative Sciences, 29*, 280-293.

Chapman, D. S., Uggerslev, K. L., Carroll, S. A., Piasentin, K. A., & Jones, D. A. (2005). Applicant attraction to organizations and job choice: a meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology, 90*(5), 928.

Cheek, N. N., & Schwartz (2016). On the meaning and measurement of maximization. *Judgment and Decision Making, 11*, 126-146.

Colquitt, J. A., Sabey, T. B., Rodell, J. B. & Hill, E. T. (2019). Content validation guidelines: Evaluation criteria for definitional correspondence and definitional distinctiveness. *Journal of Applied Psychology, 104*(10), 1243-1265.

Costa Jr, P. T., & McCrae, R. R. (2008). *The Revised Neo Personality Inventory (neo-pi-r)*. Sage Publications, Inc.

Costello, A. B. & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research, and Evaluation, 10*(10), 1-9.

Cronbach, L. J. (1990). *Essentials of psychological testing.* New York, NY: Harper & Row.

Curry, J. P., Wakefield, D. S., Price, J. L., & Mueller, C. W. (1986). On the causal ordering of job satisfaction and organizational commitment. *Academy of Management Journal, 29*(4), 847-858.

Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology, 90*(6), 1241.

De Clercq, D., & Belausteguigoitia, I. (2017). The usefulness of tenacity in spurring problem-focused voice: The moderating roles of workplace adversity. *Journal of Business and Psychology, 32*(4), 479-493.

De Fruyt, F., & Mervielde, I. (1999). RIASEC types and Big Five traits as predictors of employment status and nature of employment. *Personnel Psychology, 52*(3), 701-727.

Dewey, J. (1929). *The Quest for Certainty*. Minton, Balch.

Diemer, M. A., Mistry, R. S., Wadsworth, M. E., Lopez, I., & Reimers, F. (2013). Best practices in conceptualizing and measuring social class in psychological research. *Analyses of Social Issues and Public Policy*, *13*(1), 77-113.

Dow, J., & da Costa Werlang, S. R. (1992). Uncertainty aversion, risk aversion, and the optimal choice of portfolio. *Econometrica: Journal of the Econometric Society*, 197-204.

Edwards, J. R., & Parry, M. E. (1993). On the use of polynomial regression equations as an alternative to difference scores in organizational research. *Academy of Management Journal, 36*(6), 1577-1613.

Edwards, J. R., & Rothbard, N. P. (1999). Work and family stress and well-being: An examination of person-environment fit in the work and family domains. *Organizational Behavior and Human Decision Processes, 77*(2), 85-129.

Ellsberg, D. (1961). Risk, ambiguity, and the Savage axioms. *The Quarterly Journal of Economics*, 643-669.

Epstein, L. G. (1999). A definition of uncertainty aversion. *The Review of Economic Studies,*
    66(3), 579-608.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use
    of exploratory factor analysis in psychological research. *Psychological Methods, 4*(3),
    272.

Festinger, L. (1962). Cognitive dissonance. *Scientific American, 207*(4), 93-106.

Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., Vracheva, V. (2017). Psychological
    safety: A meta-analytic review and extension. *Personnel Psychology, 70*, 113-165.

Ganster D. C., & Rosen, C. C. (2013). Work stress and employee health. A multidisciplinary
    review. *Journal of Management, 39*(5), 1085-1122.

Gerrity, M. S., White, K. P., DeVellis, R. F., & Dittus, R. S. (1995). Physicians' reactions to
    uncertainty: refining the constructs and scales. *Motivation and Emotion, 19*(3), 175-191.

Grandey, A. A. (2000). Emotional regulation in the workplace: A new way to conceptualize
    emotional labor. *Journal of Occupational Health Psychology, 5*(1), 95.

Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the big-five
    personality domains. *Journal of Research in Personality, 37*(6), 504-528.

Gottfredson, G. D., & Holland, J. L. (1991). *The position classification inventory: Professional
    manual.* Odessa, FL: Psychological Assessment Resources.

Gross, A. (1998). The emerging field of emotion regulation: An integrative review. *Review of
    General Psychology, 2*(3), 271-299.

Gupta, A. K., & Govindarajan, V. (1984). Business unit strategy, managerial characteristics, and
    business unit effectiveness at strategy implementation. *Academy of Management Journal,
    27*(1), 25-41.

Hancock, J., & Mattick, K. (2020). Tolerance of ambiguity and psychological well-being in medical training: a systematic review. *Medical Education, 54*(2), 125-137.

Harrison, R. V. (1985). The person-environment fit model and the study of job stress. In T.A. Beehr & R. S. Bhagat (Eds.), *Human Stress and Cognition in Organizations* (pp. 23-55). New York. NY: Wiley.

Harrison, D. A., & McLaughlin, M. E. (1991). Exploring the cognitive processes underlying responses to self-report instruments: Effects of item context on work attitude measures. Academy of Management *Proceedings, 1,* 310-314).

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods, 1*(1), 104-121.

Hinkin, T. R. & Tracey, J. B. (1999). An analysis of variance approach to content validation. *Organizational Research Methods, 2*(2), 175-186.

Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments.* Psychological Assessment Resources.

Hogan, R., & Blickle, G. (2013). Socioanalytic theory. In *Handbook of personality at work* (pp. 91-108). Routledge.

Hogg, M. A. (2000). Subjective uncertainty reduction through self-categorization: A motivational theory of social identity processes. *European review of social psychology, 11*(1), 223-255.

Hogg, M. A., & Terr, D. J. (2000). Social identity and self-categorization processes in organizational contexts. *Academy of Management Review, 25*, 121-140.

Houran, J., & Williams, C. (1998). Relation of tolerance of ambiguity to global and specific paranormal experience. *Psychological Reports, 83*(3), 807-818.

Hunter, J. E.., & Schmidt, F. L. (1996). Intelligence and job performance. *Psychology, Public Policy, and Law, 2*, 447-472.

Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. *Academy of Management Journal, 47*(3), 368-384.

Jessani, Z., & Harris, P. B. (2018). Personality, politics, and denial: Tolerance of ambiguity, political orientation, and disbelief in climate change. *Personality and Individual Differences, 131*, 121-123.

Johnson, T. W., & Stinson, J. E. (1975). Role ambiguity, role conflict, and satisfaction: moderating effects of individual differences. *Journal of Applied Psychology, 60*(3), 329.

Jundt, D. K., Shoss, M. K., & Huang, J. L. (2015). Individual adaptive performance in organizations: A review. *Journal of Organizational Behavior, 36*(S1), S53-S71.

Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology, 52*(3), 621-652.

Judge, T. A., & Ilies, R. (2002). Relationships of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology, 87*(4), 797-807.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33*(4), 692-724.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47*(2), 263-291.

Katsaros, K. K., Tsirikas, A. N., & Nicolaidis, C. S. (2014). Managers' workplace attitudes, tolerance of ambiguity and firm performance: The case of Greek banking industry. *Management Research Review*.

Keenan, A. (1978). Selection interview performance and intolerance of ambiguity. *Psychological Reports, 42*(2), 353-354.

Keenan, A., & McBain, G. D. M. (1978). The Job-Related Consequences of Different Types of Role Stress. *Personnel Review*.

Kish-Gephart, J. J., & Campbell, J. T. (2015). You don't forget your roots: The influence of CEO social class background on strategic risk taking. *Academy of Management Journal, 58*(6), 1614-1636.

Kristof, A. L. (1996). Person-organization fit. An integrative review of its conceptualization, measurement, and implications, *Personnel Psychology, 49*(1), 1-49.

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individual's fit at work: A meta-analysis of person-job, person-organization, person–group, and person–supervisor fit. *Personnel Psychology, 58*(2), 281-342.

Kozlowski, S. W. J., & Bell, B. S. (2013). Work groups and teams in organizations. In N. W. Schmitt, S. Highhouse, & I. B. Weiner (Eds.), *Handbook of psychology: Industrial and organizational psychology* (pp. 412–469). John Wiley & Sons, Inc..

Kuhn, G., Goldberg, R., & Compton, S. (2009). Tolerance for uncertainty, burnout, and satisfaction with the career of emergency medicine. *Annals of Emergency Medicine, 54*(1), 106-113.

Lang, J. W., Kersting, M., Hülsheger, U. R., & Lang, J. (2010). General mental ability, narrower

    cognitive abilities, and job performance: The perspective of the nested-factors model of

    cognitive abilities. *Personnel Psychology, 63*(3), 595-640.

Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The

    role of affect and cognitions. *Journal of Applied Psychology, 87*(1), 131-142.

Lewin, K. (1943). Psychology and the process of group living. *The Journal of Social*

    Psychology, 17(1), 113-131.

Lindley, D. V. (2013). *Understanding uncertainty*. John Wiley & Sons.

Lorsch, J. W., & Morse, J. J. (1974). *Organizations and their members: A contingency approach*.

    Harper Collins Publishers.

Luzsa, R., & Mayr, S. (2019). Links between users' online social network homogeneity,

    ambiguity tolerance, and estimated public support for own opinions. *Cyberpsychology,*

    Behavior, and Social Networking, 22(5), 325-329.

MacDonald, A. P. (1970). Revised scale for ambiguity tolerance: Reliability and validity.

    Psychological Reports, 26, 791-789.

March, J. G., & Shapira, Z. (1992). Variable risk preferences and the focus of attention.

    Psychological Review, 99(1), 172.

McCrae, R. R. (1996). Social consequences of experiential openness. *Psychological Bulletin,*

    120, 323-337.

McLain, D. L. (1993). The MSTAT-I: A new measure of an individual's tolerance for ambiguity.

    Educational and psychological measurement, 53(1), 183-189.

McLain, D. L. (2009). Evidence of the Properties of an Ambiguity Tolerance Measure: The

Multiple Stimulus Types Ambiguity Tolerance Scale-II (MSTAT–II). *Psychological*

Reports, 105(3), 975–988.

McLain, D. L., Kefallonitis, E., & Armani, K (2015). Ambiguity tolerance in organizations:

Definitional clarification and perspectives on future research. *Frontiers in Psychology, 6.*

Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data.

Psychological Methods, 17(3), 437.

Mishra, S. (2014). Decision-making under risk integrating perspective from biology, economics,

and psychology. *Personality and Social Psychology Review.*

Morrison, E. W. (1993). A longitudinal study of the effects of information seeking on newcomer

socialization. *Journal of Applied Psychology, 78*(2), 173-183.

Motowidlo, S. J. (2003). Job performance. *Handbook of psychology: Industrial and*

Organizational Psychology, 12, 39-53.

Munyon, T. P., Hochwarter, W. A., Perrewé, P. L., & Ferris, G. R. (2010). Optimism and the

nonlinear citizenship behavior—Job satisfaction relationship in three studies. *Journal of*

Management, 36(6), 1505-1528.

Nau, R. F. (2006). Uncertainty aversion with second-order utilities and probabilities.

Management Science, 52(1), 136-145.

Neves, P., & Eisenberger, R. (2014). Perceived organizational support and risk taking. *Journal of*

Managerial Psychology, 29(2),

Newman, D. A., & Lyon, J. S. (2009). Recruitment efforts to reduce adverse impact: Targeted

recruiting for personality, cognitive ability, and diversity. *Journal of Applied Psychology,*

94(2), 298.

Ng, T. W., & Feldman, D. C. (2013). Does longer job tenure help or hinder job performance? *Journal of Vocational Behavior, 83*(3), 305-314.

Ng, T. W., & Feldman, D. C. (2010). Organizational tenure and job performance. *Journal of Management, 36*(5), 1220-1250.

Nunnally, J. C., and Bernstein, I. H. (1994). *Psychometric Theory.* New York, NY: McGraw-Hill.

Nicolaidis, C., & Katsaros, K. (2011). Tolerance of ambiguity and emotional attitudes in a changing business environment: A case of Greek IT CEOs. *Journal of Strategy and Management.*

O'Neill, T. A., & Hastings, S. E. (2011). Explaining workplace deviance behavior with more than just the "Big Five." *Personality and Individual Differences, 50*(2), 268-273.

O'reilly, C. A., & Caldwell, D. F. (1980). Job choice: The impact of intrinsic and extrinsic factors on subsequent satisfaction and commitment. *Journal of Applied Psychology, 65*(5), 559.

Park, L. S. (2021). Supporting the deskless workforce. Research program findings. *HR Research Team for SAP SuccessFactors Solutions.*
https://dam.sap.com/mac/app/p/pdf/asset/preview/HXuUoJk?ltr=a

Preacher, K. J., Zhang, G., Kim, C., & Mels, G. (2013). Choosing the optimal number of factors in exploratory factor analysis: A model selection perspective. *Multivariate Behavioral Research, 48*(1), 28-56.

Rowe, W. D. (1994). Understanding uncertainty. *Risk Analysis, 14*(5), 743-750.

Rush, M. C., Schoel, W. A., & Barnard, S. M. (1995). Psychological resiliency in the public

sector:" Hardiness" and pressure for change. *Journal of Vocational Behavior, 46*(1), 17-
39.

Ryan, A. M., & Ployhart, R. E. (2014). A century of selection. *Annual Review of Psychology, 65*,
693-717.

Ryan, R. M., & Deci, E. L. (2019). Chapter four – brick by brick: The origins, development, and
future of self-determination theory. *Advances in Motivation Science, 6*, 111-156.

Salas, E., Kozlowski, S. W., & Chen, G. (2017). A century of progress in industrial

organizational psychology: Discoveries and the next century. *Journal of Applied
Psychology, 102*(3), 167-210.

Schneider, B. (1987). The people make the place. *Personnel Psychology, 40*(3), 437-453.

Schneider, B., White, S. S., & Paul, M. C. (1998). Linking service climate and customer

perceptions of service quality: Tests of a causal model. *Journal of Applied Psychology,
83*(2), 150.

Schoemaker, P. J. (2004). Forecasting and scenario planning: the challenges of uncertainty and
complexity. *Blackwell Handbook of Judgment and Decision Making*, 274-296.

Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002).

Maximizing versus satisficing: happiness is a matter of choice. *Journal of Personality
and Social Psychology, 83*(5), 1178.

Simon, H. A. (1955). A behavioral model of rational choice. *The Quarterly Journal of
Economics, 69*(1), 99-118.

Simon, H. A. (1956). Rational choice and the structure of the environment. *Psychological
Review, 63*(2), 129.

Soane, E., Truss, C., Alfes, K., Shantz, A., Rees, C., & Gatenby, M. (2012). Development
  application of a new measure of employee engagement: The ISA engagement scale.
  Human Resource Development International, 15(5), 529-547.0

Stewart Jr, W. H., & Roth, P. L. (2001). Risk propensity differences between entrepreneurs and
  managers: A meta-analytic review. *Journal of Applied Psychology, 86*(1), 145.

Storme, M., Celik, P., & Myszkowski, N. (2019). Career decision ambiguity tolerance and career
  decision-making difficulties in a French sample: The mediating role of career decision
  self-efficacy. *Journal of Career Assessment, 27*(2), 273-288.

Tabachnick, B. G., & Fidel, L. S. (2001). *Using Multivariate Statistics.* Boston: Allyn and
  Bacon.

Tapanes, M. A., Smith, G. G., & White, J. A. (2009). Cultural diversity in online learning: A
  study of the perceived effects of dissonance in levels of individualism/collectivism and
  tolerance of ambiguity. *The Internet and Higher Education, 12*(1), 26-34.

Tegano, D. W. (1990). Relationship of tolerance of ambiguity and playfulness to creativity.
  Psychological Reports, 66(3), 1047-1056.

Tsui, J. (199). Tolerance for ambiguity, uncertainty audit qualifications, and bankers'
  perceptions. *Psychological Reports, 72*(3), 915-919.

Turban, D. B. (2001). Organizational attractiveness as an employer on college campuses: An
  examination of the applicant population. *Journal of Vocational Behavior, 58*(2), 293-312.

Turner, B. M., Rim, H. B., Betz, N. E., & Nygren, T. E. (2012). The maximization inventory.
  Judgment and Decision Making, 7(1), 48-60.

Tversky, A., & Kahneman, D. (1983). Extensional versus intuitive reasoning: The conjunction
  fallacy in probability judgment. *Psychological Review, 90*(4), 293.

Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty, 5*(4), 297-323.

Uggerslev, K. L., Fassina, N. E., & Kraichy, D. (2012). Recruiting through the stages: A meta-analytic test of predictors of applicant attraction at different stages of the recruiting process. *Personnel Psychology, 65*(3), 597-660.

Uziel, L., & Baumeister, R. F. (2017). The self-control irony: Desire for self-control limits exertion of self-control in demand settings. *Personality and Social Psychology Bulletin, 43,* (5), 693-705.

Van Iddekinge, C. H., Aguinis, H., Mackey, J. D., & DeOrtentiis, P. S. (2018). A meta-analysis of the interactive, additive, and relative effects of cognitive ability and motivation on performance. *Journal of Management, 44*(1), 249-279.

Van Iddekinge, C. H., Roth, P. L., Putka, D. J., & Lanivich, S. E. (2011). Are you interested? A meta-analysis of relations between vocational interests and employee performance and turnover. *Journal of Applied Psychology, 96*(6), 1167.

Van Vianen, A. E. (2018). Person–environment fit: A review of its basic tenets. *Annual Review of Organizational Psychology and Organizational Behavior, 5*, 75-101.

Wanberg, C. R., Csillag, B., Douglass, R. P., Zhou, L., & Pollard, M. S. (2020). Socioeconomic status and well-being during COVID-19: A resource-based examination. *Journal of Applied Psychology, 105*(12), 1382-1396.

Xu, H., & Tracey, T. J. (2015). Career decision ambiguity tolerance scale: Construction and initial validations. *Journal of Vocational Behavior, 88*, 1-9.

Yu, K. Y. T. (2016). Inter-relationships among different types of person-environment fit and job satisfaction. *Applied Psychology, 65*(1), 38-65.

Yu, K. Y. T. (2013). A motivational model of person-environment fit: Psychological motives as

    drivers of change. In A. L. Kristof-Brown & J. Billsberry (Eds.), *Organizational fit: Key*

    issues and new directions (pp. 21–49). Wiley Blackwell.

Yurtsever, G. (2001). Tolerance of ambiguity, information, and negotiation. *Psychological*

    Reports, 89(1), 57-64.

You, J., Chen, Y., Wang, W., & Shi, C. (2018). Uncertainty, opportunistic behavior, and

    governance in construction projects: The efficacy of contracts. *International Journal of*

    Project Management, 36(5), 795-807.

Zhang, D. C., Highhouse, S., & Nye, C. D. (2019). Development and validation of the general

    risk propensity scale (GRiPS). *Journal of Behavioral Decision Making, 32*(2), 152-167.

Table 1

Initial Set of Generated Items with Content Validation Results.

-	Job task uncertainty tolerance items	n_c	n_o	p_{sa}	c_{sv}
JT1	Unstructured work tasks energize me	48	5	0.83	0.74
JT2	I perform best when given little direction for my tasks	46	6	0.79	0.69
JT3	I prefer to create my own tasks at work	51	5	0.88	0.79
JT4	I do not need directions to complete my work tasks	46	6	0.79	0.69
JT5	I do best when I complete tasks in an unstructured way	49	4	0.84	0.78
JT6	I am comfortable with changing work task responsibilities	53	3	0.91	0.86
JT7	I prefer tasks with unclear expectations	48	5	0.83	0.74
JT8	I am comfortable not having a routine in my workday	51	4	0.88	0.81
JT9	I enjoy completing work tasks that I have not seen before	51	4	0.88	0.81
JT10	I do not need to have clearly defined work goals	51	3	0.88	0.83
JT11	I like being able to 'do my own thing' at work	50	6	0.86	0.76
JT12	I get bored when I do the same tasks at work	49	5	0.84	0.76
JT13	I enjoy solving new challenges at work	51	5	0.88	0.79
JT14	I am comfortable when I have little direction for doing my work	48	6	0.83	0.72
-	**Organizational uncertainty tolerance items**	n_c	n_o	p_{sa}	c_{sv}
O1	I prefer working in organizations without strict policies	52	3	0.90	0.84

		n_c	n_o	p_{sa}	c_{sv}
O2	I prefer working in organizations without clear procedures	47	13	0.81	0.59
O3	I do not need a clear mission at work	13	41	0.22	-0.48
O4	I prefer an unstructured organizational hierarchy	51	3	0.88	0.83
O5	I find change in my organization exciting	52	3	0.90	0.84
O6	I thrive in constantly changing organizations	49	3	0.84	0.79
O7	Organizational procedures hold me back	53	2	0.91	0.88
O8	I am comfortable with my organization changing policies	51	5	0.88	0.79
O9	I work well without clear guidelines from my organization	47	9	0.81	0.66
O10	I prefer a flexible work environment	11	46	0.19	-0.60
O11	I am not concerned by a lack of direction in my organization	47	5	0.81	0.72
O12	I respond positively to change in my organization	50	8	0.86	0.72
O13	Work policies often get in the way	27	28	0.47	-0.02
O14	I prefer navigating my organization how I see best	50	5	0.86	0.78
-	**Peer-interpersonal uncertainty tolerance**	n_c	n_o	p_{sa}	c_{sv}
PI1	I prefer my work peer relationships to form naturally	51	4	0.88	0.81
PI2	I thrive in unstructured teams	17	27	0.29	-0.17
PI3	I like interacting with my coworkers outside of work	50	5	0.86	0.78
PI4	Social interaction with work peers should not be structured	53	4	0.91	0.84
PI5	I do not need dedicated time to get to know my work peers personally	51	3	0.88	0.83
PI6	I like being able to talk to my work peers at any time	53	2	0.91	0.88

PI7	I enjoy interacting with my peers outside of scheduled meetings	48	6	0.83	0.72
PI8	I enjoy getting to know new work peers personally	46	5	0.79	0.71
PI9	I like unstructured social interactions with my peers	49	5	0.84	0.76
PI10	It is acceptable for my peers to schedule last-minute meetings	47	6	0.81	0.71
PI11	I like team projects without strict roles	19	31	0.33	-0.21
PI12	I like dynamic teams	29	19	0.50	0.17
PI13	I like communicating with my peers at random times	53	3	0.91	0.86
PI14	I function well when my peers fail to communicate with me	47	6	0.81	0.71
-	**Supervisor-interpersonal uncertainty tolerance items**	n_c	n_o	p_{sa}	c_{sv}
SI1	I prefer my relationship with my supervisor to be unstructured	51	5	0.88	0.79
SI2	I prefer my relationship with my supervisor to be casual	51	3	0.88	0.83
SI3	It is best to learn the management style of my supervisor naturally	48	5	0.83	0.74
SI4	Supervisor relationships are best when they are not forced	48	6	0.83	0.72
SI5	I prefer a casual relationship with my supervisor	52	4	0.90	0.83
SI6	A structured relationship with my supervisor can negatively affect my work	49	6	0.84	0.74
SI7	I do not feel the need to understand my supervisor's preferences completely	53	2	0.91	0.88
SI8	I prefer little direction from my supervisor to accomplish my work	47	6	0.81	0.71
SI9	I prefer my supervisor to provide me with little direction	52	4	0.90	0.83
SI10	I prefer my supervisor to provide me with little feedback	54	2	0.93	0.90
SI11	I like spur-of-the-moment meetings with my supervisor	52	3	0.90	0.84

SI12	I like when my supervisor allows me to make my own decisions	53	3	0.91	0.86
SI13	I function well when my supervisor fails to communicate with me	53	3	0.91	0.86
SI14	I prefer little instruction from my supervisor to accomplish my work	48	7	0.83	0.71

Note. N_c = number of judges who sorted the item correctly. N_o = the maximum number of times an item was sorted into any other construct in the set. P_{sa} is the proportion of substantive agreement calculated index calculated with the equation $p_{sa} = n_c/N$ where N is the total number of judges. C_{sv} is the substantive validity coefficient index calculated with the equation $c_{sv} = (n_c - n_o)/N$ (Colquitt et al., 2019).

Table 2

Items Retained from Content Validation.

-	Job task uncertainty tolerance items	n_c	n_o	p_{sa}	c_{sv}
JT6	I am comfortable with changing work task responsibilities	53	3	0.91	0.86
JT3	I prefer to create my own tasks at work	51	5	0.88	0.79
JT8	I am comfortable not having a routine in my workday	51	4	0.88	0.81
JT9	I enjoy completing work tasks that I have not seen before	51	4	0.88	0.81
JT10	I do not need to have clearly defined work goals	51	3	0.88	0.83
JT13	I enjoy solving new challenges at work	51	5	0.88	0.79
-	**Organizational uncertainty tolerance items**	n_c	n_o	p_{sa}	c_{sv}
O7	Organizational procedures hold me back	53	2	0.91	0.88
O1	I prefer working in organizations without strict policies	52	3	0.90	0.84
O5	I find change in my organization exciting	52	3	0.90	0.84
O4	I prefer an unstructured organizational hierarchy	51	3	0.88	0.83
O8	I am comfortable with my organization changing policies	51	5	0.88	0.79
O12	I respond positively to change in my organization	50	8	0.86	0.72
-	**Peer-interpersonal uncertainty tolerance**	n_c	n_o	p_{sa}	c_{sv}
PI4	Social interaction with work peers should not be structured	53	4	0.91	0.84
PI6	I like being able to talk to my work peers at any time	53	2	0.91	0.88

		n_c	n_o	p_{sa}	c_{sv}
PI13	I like communicating with my peers at random times	53	3	0.91	0.86
PI1	I prefer my work peer relationships to form naturally	51	4	0.88	0.81
PI5	I do not need dedicated time to get to know my work peers personally	51	3	0.88	0.83
PI3	I like interacting with my coworkers outside of work	50	5	0.86	0.78
	Supervisor-interpersonal uncertainty tolerance items	n_c	n_o	p_{sa}	c_{sv}
SI10	I prefer my supervisor to provide me with little feedback	54	2	0.93	0.90
SI7	I do not feel the need to understand my supervisor's preferences completely	53	2	0.91	0.88
SI12	I like when my supervisor allows me to make my own decisions	53	3	0.91	0.86
SI13	I function well when my supervisor fails to communicate with me	53	3	0.91	0.86
SI5	I prefer a casual relationship with my supervisor	52	4	0.90	0.83
SI9	I prefer my supervisor to provide me with little direction	52	4	0.90	0.83

Note. N_c = number of judges who sorted the item correctly. N_o = the maximum number of times an item was sorted into any other construct in the set. P_{sa} is the proportion of substantive agreement calculated index calculated with the equation $p_{sa} = n_c/N$ where N is the total number of judges. C_{sv} is the substantive validity coefficient index calculated with the equation $c_{sv} = (n_c - n_o)/N$ (Colquitt et al., 2019).

Table 3

Study 2 Descriptive, Correlations, and Reliability Statistics

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age	33.79	10.11	-														
2. Gender	1.55	0.50	-.12	-													
3. Education	6.00	0.91	**-.26**	.15	-												
4. Income	10.86	2.88	.00	.15	.20	-											
5. Job tenure	6.23	4.59	**.49**	-.06	-.14	.07	-										
6. Org. tenure	6.26	5.03	**.53**	-.12	-.14	.06	.85	-									
7. WUT Volatility	3.68	0.68	.06	**.18**	**.24**	.03	.05	.03	(.74)								
8. WUT Ambiguity	3.28	0.87	-.08	.02	**.26**	-.08	-.07	-.09	**.50**	(.73)							
9. WUT Interpersonal	3.82	0.68	**.22**	.04	-.01	-.02	.08	.20	**.37**	**.21**	(.69)						
10. GRiPS	3.35	1.00	-.13	.06	**.43**	.04	-.04	-.03	**.48**	**.39**	**.17**	(.94)					
11. DOSPERT-S	4.88	1.10	.09	.10	**.04**	.07	.00	-.08	**.39**	**.23**	**.34**	**.32**	(.80)				
12. DOSPERT-R	4.16	1.61	-.15	.06	**.45**	.01	-.03	-.04	**.44**	**.48**	**.19**	**.70**	**.51**	(.93)			
13. DOSPERT-F	4.22	1.51	**-.18**	.04	**.39**	.05	-.09	-.11	**.42**	**.47**	**.19**	**.70**	**.47**	**.78**	(.90)		
14. DOSPERT-HS	3.86	1.54	-.16	.09	**.33**	-.08	-.11	-.14	**.31**	**.47**	.11	**.59**	**.50**	**.72**	**.76**	(.87)	
15. DOSPERT-E	3.90	1.72	**-.25**	.06	**.40**	-.08	-.10	-.11	**.31**	**.46**	.14	**.66**	**.41**	**.77**	**.82**	**.85**	(.94)

Note. n = 211. Gender (1 = male; 2 = female); Bolded = significant correlation at < .05; GRiPS = Domain general risk taking propensity; DOSPERT domains = social, recreational, financial, health/safety, ethical risk taking propensity.

Table 4

Results of Factor Analysis for Study 2.

Model	X^2	df	RMSEA	RMSEA 90% CI	RMSR	TLI	CFI
2 Factor Model	470.26	229	0.071	[0.61 , 0.081]	0.07	.748	.789
Initial 3 Factor Model	360.97	207	0.060	[0.05 , 0.007]	0.06	.822	.868
Refined 3 Factor Model	46.46	33	0.044	[0.00 , 0.072]	0.04	.940	.971
4 Factor Model	268.81	186	0.046	[0.03 , 0.058]	0.05	.893	.929
5 Factor Model	204.62	166	0.033	[0.01 , 0.048]	0.03	.944	.967
6 Factor Model	168.47	147	0.026	[0.00 , 0.044]	0.03	.965	.982

Note. X^2 = chi-squared statistic; *df* = degrees of freedom; RMSEA = root mean square error of approximation; RMSR = standardized root-mean-square residual; RMSEA 90% CI = 90% confidence interval for RMSEA statistic; TLI = Tucker-Lewis index; CFI = comparative fit index.

Table 5

Standardized Factor Loadings for 24 Item 3 Factor Model

-	Job task uncertainty tolerance items	*Factor 1*	*Factor 2*	*Factor 3*
JT6	I am comfortable with changing work task responsibilities	**0.63**	0.00	0.01
JT3	I prefer to create my own tasks at work	**0.35**	0.20	0.25
JT8	I am comfortable not having a routine in my workday	0.17	**0.48**	0.01
JT9	I enjoy completing work tasks that I have not seen before	**0.41**	0.18	0.10
JT10	I do not need to have clearly defined work goals	-0.12	**0.80**	0.08
JT13	I enjoy solving new challenges at work	**0.64**	-0.11	0.10
-	**Organizational uncertainty tolerance items**	*Factor 1*	*Factor 2*	*Factor 3*
O7	Organizational procedures hold me back	0.10	**0.42**	0.07
O1	I prefer working in organizations without strict policies	0.16	0.22	**0.34**
O5	I find change in my organization exciting	**0.71**	0.02	-0.12
O4	I prefer an unstructured organizational hierarchy	0.05	**0.65**	0.03
O8	I am comfortable with my organization changing policies	**0.62**	0.08	0.04
O12	I respond positively to change in my organization	**0.65**	-0.05	0.00
-	**Peer-interpersonal uncertainty tolerance**	*Factor 1*	*Factor 2*	*Factor 3*
PI4	Social interaction with work peers should not be structured	0.02	**0.38**	0.27
PI6	I like being able to talk to my work peers at any time	0.24	0.03	**0.40**

PI13	I like communicating with my peers at random times	0.17	0.13	**0.39**
PI1	I prefer my work peer relationships to form naturally	-0.07	-0.02	**0.73**
PI5	I do not need dedicated time to get to know my work peers personally	-0.09	**0.53**	-0.06
PI3	I like interacting with my coworkers outside of work	**0.35**	-0.02	0.17
-	*Supervisor-interpersonal uncertainty tolerance items*	*Factor 1*	*Factor 2*	*Factor 3*
SI10	I prefer my supervisor to provide me with little feedback	0.24	0.26	0.16
SI7	I do not feel the need to understand my supervisor's preferences completely	0.07	**0.55**	**0.33**
SI12	I like when my supervisor allows me to make my own decisions	**0.32**	-0.10	0.27
SI13	I function well when my supervisor fails to communicate with me	0.21	**0.49**	**0.34**
SI5	I prefer a casual relationship with my supervisor	0.19	0.08	**0.34**
SI9	I prefer my supervisor to provide me with little direction	0.28	0.21	0.23

Note. Bolded items are equal to or above the minimum loading of an item of .32 given by Tabachnick and Fidel (2001) and affirmed by Costello and Osborne (2005).

Table 6

Standardized Factor Loadings for 24 Item 4 Factor Model

-	Job task uncertainty tolerance items	F1	F2	F3	F4
JT6	I am comfortable with changing work task responsibilities	**0.66**	0.03	0.00	-0.03
JT3	I prefer to create my own tasks at work	**0.38**	0.21	0.25	-0.01
JT8	I am comfortable not having a routine in my workday	0.22	**0.49**	0.04	-0.10
JT9	I enjoy completing work tasks that I have not seen before	**0.46**	0.20	0.11	-0.05
JT10	I do not need to have clearly defined work goals	-0.13	**0.78**	0.08	0.05
JT13	I enjoy solving new challenges at work	0.73	-0.09	0.10	-0.11
-	**Organizational uncertainty tolerance items**	F1	F2	F3	F4
O7	Organizational procedures hold me back	0.03	**0.42**	0.03	0.20
O1	I prefer working in organizations without strict policies	0.23	0.24	**0.36**	-0.10
O5	I find change in my organization exciting	**0.64**	0.04	-0.15	0.14
O4	I prefer an unstructured organizational hierarchy	0.01	**0.64**	0.02	0.11
O8	I am comfortable with my organization changing policies	**0.53**	0.09	-0.02	0.27
O12	I respond positively to change in my organization	**0.53**	-0.05	-0.06	0.28
-	**Peer-interpersonal uncertainty tolerance**	F1	F2	F3	F4
PI4	Social interaction with work peers should not be structured	0.09	**0.39**	0.30	-0.13
PI6	I like being able to talk to my work peers at any time	0.14	0.02	**0.35**	**0.34**

		F1	F2	F3	F4
PI13	I like communicating with my peers at random times	0.00	0.12	**0.34**	**0.48**
PI1	I prefer my work peer relationships to form naturally	-0.04	-0.02	**0.68**	0.08
PI5	I do not need dedicated time to get to know my work peers personally	0.03	**0.56**	-0.01	-0.30
PI3	I like interacting with my coworkers outside of work	0.17	-0.05	0.09	**0.51**
-	*Supervisor-interpersonal uncertainty tolerance items*	*F1*	*F2*	*F3*	*F4*
SI10	I prefer my supervisor to provide me with little feedback	0.09	0.25	-0.13	**0.40**
SI7	I do not feel the need to understand my supervisor's preferences completely	0.05	**0.56**	-0.18	0.03
SI12	I like when my supervisor allows me to make my own decisions	**0.39**	-0.09	**0.39**	-0.11
SI13	I function well when my supervisor fails to communicate with me	0.17	**0.49**	-0.26	0.06
SI5	I prefer a casual relationship with my supervisor	0.13	0.07	**0.38**	0.26
SI9	I prefer my supervisor to provide me with little direction	0.21	0.21	0.10	0.22

Note. Bolded items are equal to or above the minimum loading of an item of .32 given by Tabachnick and Fidel (2001) and affirmed by Costello and Osborne (2005).

Table 7

Standardized Factor Loadings for the Refined 12 Items for the 3 Factor Model

Original	Refined	Workplace Uncertainty Tolerance (WUT) Items	*Volatility*	*Ambiguity*	*Interpersonal*
O5	V1	I find change in my organization exciting	**0.67**	0.06	-0.05
O12	V2	I respond positively to change in my organization	**0.55**	-0.01	0.11
JT13	V3	I enjoy solving new challenges at work	**0.64**	-0.05	0.03
JT6	V4	I am comfortable with changing work task responsibilities	**0.67**	-0.02	0.03
JT10	A1	I do not need to have clearly defined work goals	-0.09	**0.80**	0.07
O4	A2	I prefer an unstructured organizational hierarchy	0.06	**0.69**	0.01
PI5	A3	I do not need dedicated time to get to know my work peers personally	0.02	**0.50**	-0.16
JT8	A4	I am comfortable not having a routine in my workday	0.23	**0.50**	-0.06
PI1	I1	I prefer my work peer relationships to form naturally	-0.10	0.07	**0.63**
PI6	I2	I like being able to talk to my work peers at any time	0.14	0.05	**0.54**
PI13	I3	I like communicating with my peers at random times	0.05	0.14	**0.51**
SI5	I4	I prefer a casual relationship with my supervisor	0.11	0.03	**0.52**

Note. Original refers to the originally intended factor for which the item was written. Refined represents the new factor for which the item belongs. Bolded items are equal to or above the minimum loading of an item of .32 given by Tabachnick and Fidel (2001) and affirmed by Costello and Osborne (2005).

Table 8

Descriptive Statistics and Correlations for WUT Items in Study 3

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Volatility 1	3.91	0.88	-											
2. Volatility 2	4.05	0.85	.53	-										
3. Volatility 3	4.14	0.87	.40	.39	-									
4. Volatility 4	4.04	0.87	.40	.38	.40	-								
5. Ambiguity 1	3.05	1.23	.12	.09	.10	.12	-							
6. Ambiguity 2	3.27	1.22	.21	.16	.12	.14	.52	-						
7. Ambiguity 3	3.29	1.25	.07	.06	-.04	.16	.55	.47	-					
8. Ambiguity 4	3.53	1.21	.27	.13	.11	.16	.50	.51	.42	-				
9. Interpersonal 1	4.05	0.76	.26	.25	.24	.31	-.07	.01	-.02	.01	-			
10. Interpersonal 2	3.97	0.82	.38	.39	.23	.31	.05	.09	-.04	.11	.27	-		
11. Interpersonal 3	4.04	0.79	.31	.22	.21	.34	-.04	.05	-.02	.04	.34	.39	-	
12. Interpersonal 4	4.04	0.81	.24	.37	.21	.27	.05	.07	.05	.10	.27	.38	.34	-

Note. n = 211.

Table 9

Standardized Factor Loadings for the Workplace Uncertainty Tolerance Scale from Study 3

Refined	Workplace Uncertainty Tolerance (WUT) Items	Volatility	Ambiguity	Interpersonal
V1	I find change in my organization exciting	.67	-	-
V2	I respond positively to change in my organization	.76	-	-
V3	I enjoy solving new challenges at work	.53	-	-
V4	I am comfortable with changing work task responsibilities	.38	-	-
A1	I do not need to have clearly defined work goals	-	.77	-
A2	I prefer an unstructured organizational hierarchy	-	.69	-
A3	I do not need dedicated time to get to know my work peers personally	-	.71	-
A4	I am comfortable not having a routine in my workday	-	.65	-
R1	I prefer my work peer relationships to form naturally	-	-	.39
R2	I like being able to talk to my work peers at any time	-	-	.37
R3	I like communicating with my peers at random times	-	-	.76
R4	I prefer a casual relationship with my supervisor	-	-	.37

Table 10

Descriptive Statistics, Reliability, and Correlations of Variables for Study 3

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Age	33.16	9.53	-																								
2. Gender	1.46	0.05	-.20	-																							
3. Education	5.95	0.92	-.16	.16	-																						
4. Income	10.85	2.86	-.10	.16	.24	-																					
5. Job tenure	6.13	4.49	.53	-.03	-.14	-.01	-																				
6. Org. tenure	5.85	4.59	.49	-.06	-.14	.04	.82	-																			
7. WUT-V	4.04	0.65	-.03	.00	.26	.09	-.02	-.04	(.73)																		
8. WUT-A	3.28	0.97	-.06	.03	.21	-.15	-.07	-.14	.21	(.83)																	
9. WUT-I	4.04	0.56	.08	-.01	-.01	.09	.10	.09	.54	.05	(.65)																
10. DOSPERT-S	4.94	1.23	.06	-.07	.12	-.04	.07	-.03	.30	.26	.33	(.86)															
11. DOSPERT-R	4.31	1.56	-.05	-.01	.37	-.03	-.01	-.13	.33	.46	.18	.65	(.93)														
12. DOSPERT-F	4.47	1.75	-.05	.00	.39	-.03	-.02	-.15	.42	.45	.15	.65	.85	(.91)													
13. DOSPERT-HS	4.04	1.82	-.09	-.03	.29	-.06	-.05	-.17	.13	.50	-.03	.62	.78	.77	(.93)												
14. DOSPERT-E	3.98	0.88	-.13	.02	.41	-.08	-.03	-.17	.18	.51	.01	.57	.83	.83	.89	(.95)											
15. GRiPS	3.29	0.88	-.18	.06	.38	-.03	-.09	-.22	.43	.43	.10	.24	.60	.66	.55	.65	(.94)										
16. Optimism	3.00	0.40	-.05	.09	.24	.12	.12	.04	.50	.31	.47	.32	.41	.42	.26	.33	.47	(.54)									
17. Tenacity	3.87	0.52	.07	.00	.00	.14	.13	.11	.51	.05	.57	.39	.20	.16	.07	.02	.09	.49	(.68)								
18. Feedback	2.82	0.58	-.12	.06	.28	.13	.06	-.03	.48	.27	.35	.31	.47	.50	.31	.40	.48	.48	.52	(.72)							
19. Self-regulation	3.82	0.70	-.05	.13	.22	.07	-.04	-.05	.25	.24	.41	.29	.35	.34	.29	.36	.40	.37	.33	.36	(.75)						
20. AP-C	5.25	0.88	.02	.04	.25	.03	.11	.03	.47	.18	.41	.42	.46	.48	.35	.40	.33	.61	.50	.47	.41	(.62)					
21. AP-R	5.45	0.84	.07	-.03	.04	.11	.18	.13	.47	-.01	.44	.45	.34	.34	.21	.18	.16	.53	.63	.42	.24	.59	(.75)				

22. AP- I	5.45	0.88	.09	-.01	.07	.10	.20	.20	.51	.01	.55	.43	.27	.30	.14	.14	.13	.60	.60	.37	.33	.69	.71	(.81)		
23. AP-T	5.30	0.93	.00	.06	.14	.01	.09	.04	.57	.13	.46	.34	.40	.44	.23	.25	.30	.60	.61	.47	.25	.69	.70	.70	(.78)	
24. AP-S	5.39	0.99	.10	.01	.09	.03	.14	.11	.42	.06	.38	.42	.27	.31	.19	.18	.07	.58	.52	.29	.11	.66	.64	.71	.66	(.78)
25. JSI	3.23	0.98	-.09	.16	.32	-.14	-.07	-.18	-.04	.47	-.04	.33	.52	.49	.63	.68	.46	.27	.14	.23	.44	.34	.07	.11	.16	.17	(.95)

Note. n = 241. Gender (1= male; 2 = female); WUT-V = volatility tolerance; WUT-A = ambiguity tolerance; WUT-I = interpersonal uncertainty tolerance; DOSPERT-S = social risk taking propensity; DOSPERT-R = recreational risk taking propensity; DOSPERT-F = financial risk taking propensity; DOSPERT-HS = health/safety risk taking propensity; DOSPERT-E = ethical risk taking propensity; GRiPS = domain general risk taking propensity; AP-C = adaptive performance creativity; AP-R = adaptive performance reactivity in the face of emergencies; AP-I = interpersonal adaptability; AP-T = adaptive performance training effort; AP-S = adaptive performance handling work stress; JSI = job stress index. Diagonals contain reliability coefficient alpha.

Table 11

Workplace Uncertainty Tolerance Initial Nomological Network

Domain	Positively Related Variable
Workplace Uncertainty Tolerance	• Domain general risk taking propensity (+) • Social risk taking propensity (+) • Recreational risk taking propensity (+) • Financial risk taking propensity (+) • Optimism (+) • Feedback seeking behaviors (+) • Self-regulation (+) • Adaptive performance-creativity (+) • Adaptive performance-training effort (+)
Volatility tolerance	• Education (+) • Ethical risk taking propensity (+) • Tenacity (+) • Adaptive performance-reactivity in the face of emergencies (+) • Adaptive performance-interpersonal adaptability (+) • Adaptive performance-handling stress (+)
Ambiguity tolerance	• Education (+) • Income (-) • Health/safety risk taking propensity (+) • Ethical risk taking propensity (+) • Work stress (+)
Interpersonal uncertainty tolerance	• Tenacity (+) • Adaptive performance-reactivity in the face of emergencies (+) • Adaptive performance-interpersonal adaptability (+) • Adaptive performance-handling stress (+)

Note. Table is comprised of the significant relationships tested in phase 3. Variables related to workplace uncertainty tolerance exhibited significant relationship with all three factors. Valence of relationship is shown in parentheses.

Figure 1

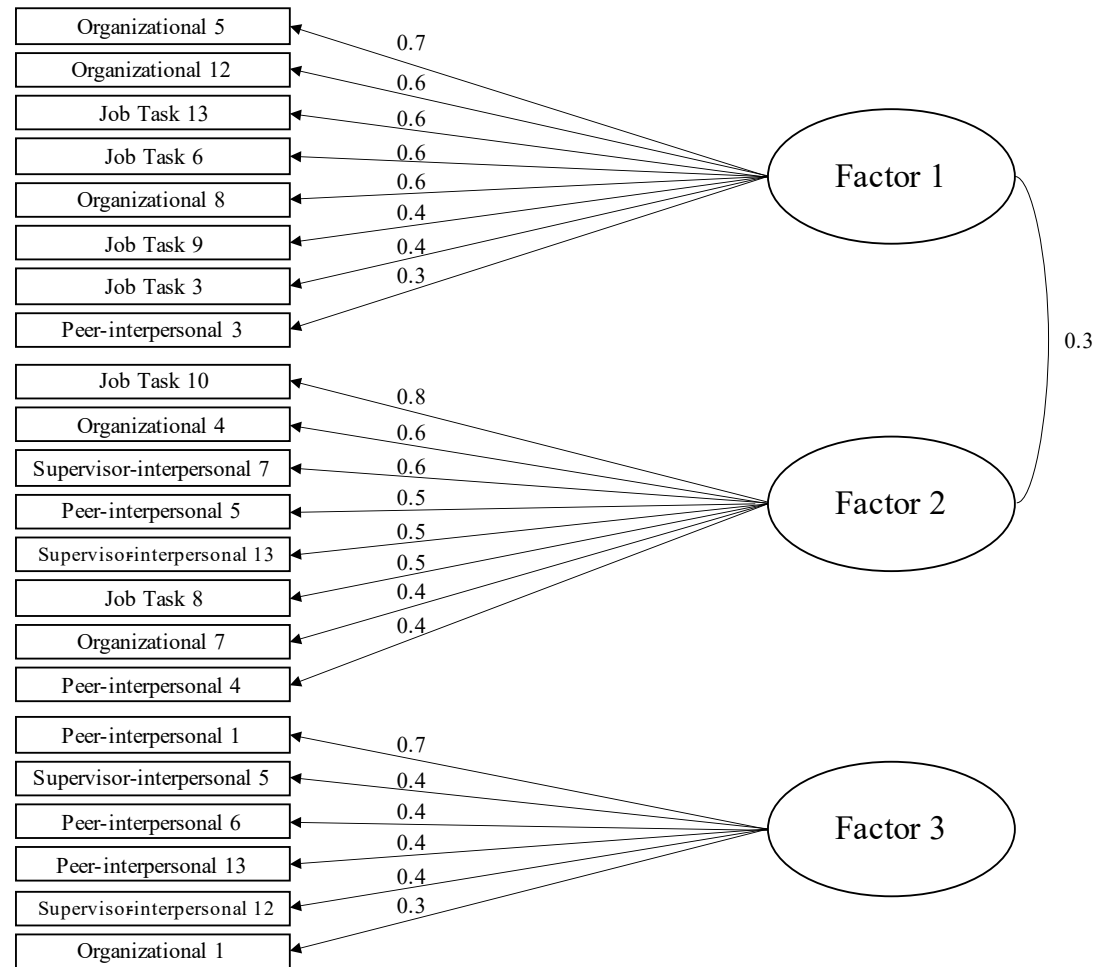Parallel Analysis with Scree Plots
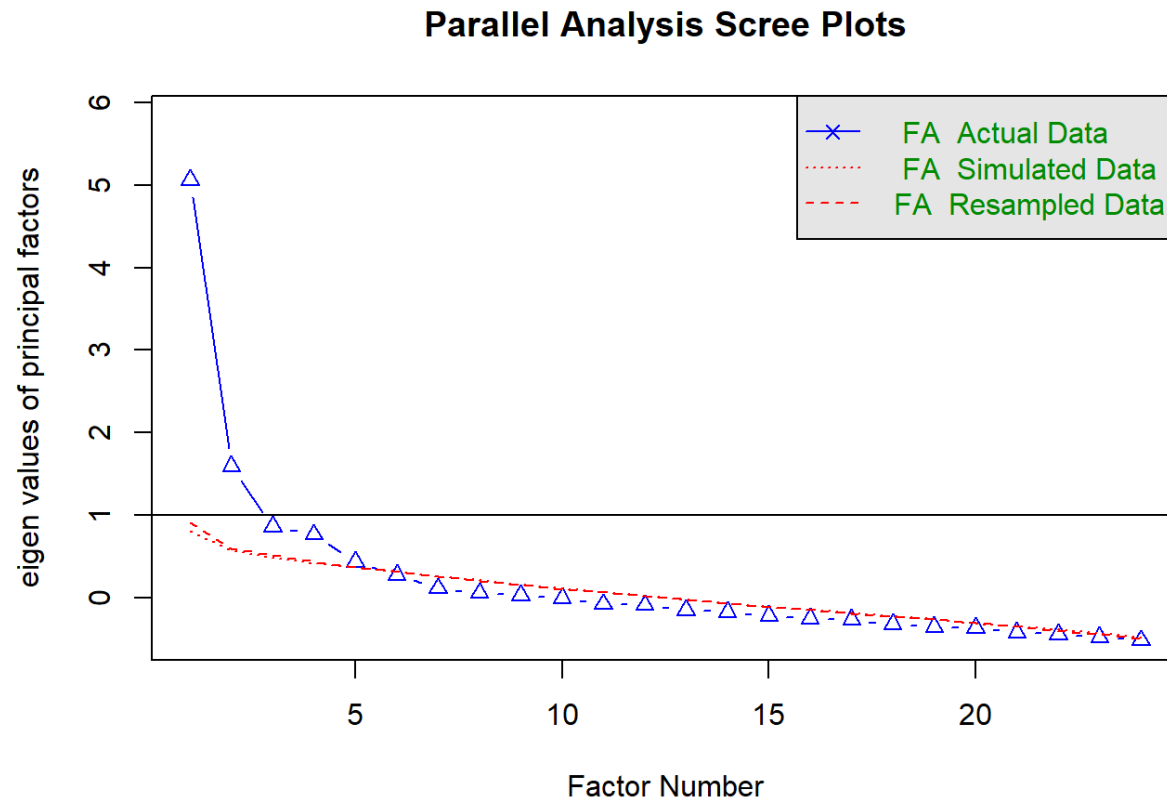
Note. Generated to investigate the initial factor structure in study 2
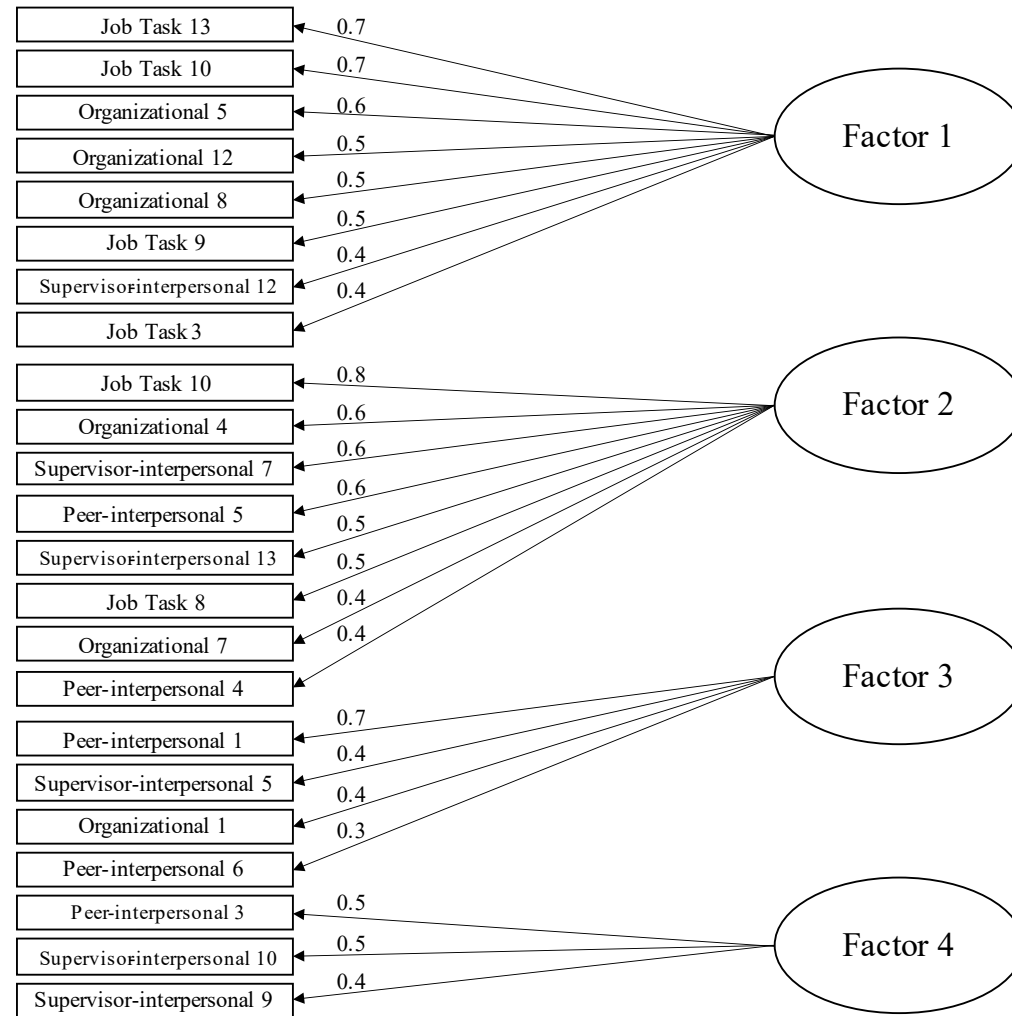
Figure 2

3 Factor Model of Workplace Uncertainty Tolerance

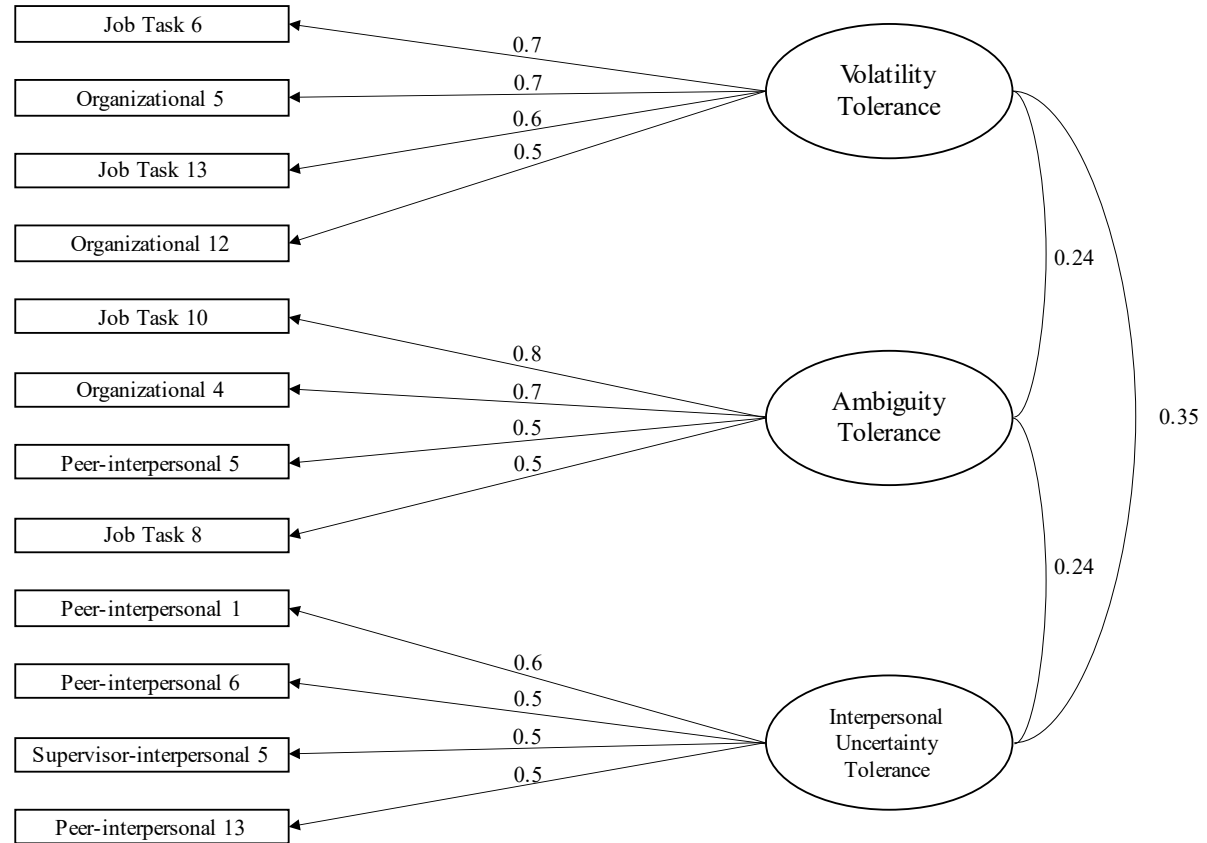*Note.* 3 factor model of workplace uncertainty tolerance in study 2.

Figure 3

4 Factor Model of Workplace Uncertainty Tolerance

Job Task 13	0.7
Job Task 10	0.7
Organizational 5	0.6
Organizational 12	0.5
Organizational 8	0.5
Job Task 9	0.5
Supervisor-interpersonal 12	0.4
Job Task 3	0.4

Factor 1

Job Task 10	0.8
Organizational 4	0.6
Supervisor-interpersonal 7	0.6
Peer-interpersonal 5	0.6
Supervisor-interpersonal 13	0.5
Job Task 8	0.5
Organizational 7	0.4
Peer-interpersonal 4	0.4

Factor 2

Peer-interpersonal 1	0.7
Supervisor-interpersonal 5	0.4
Organizational 1	0.4
Peer-interpersonal 6	0.3

Factor 3

Peer-interpersonal 3	0.5
Supervisor-interpersonal 10	0.5
Supervisor-interpersonal 9	0.4

Factor 4

Note. 4 factor model of workplace uncertainty tolerance in study 2.
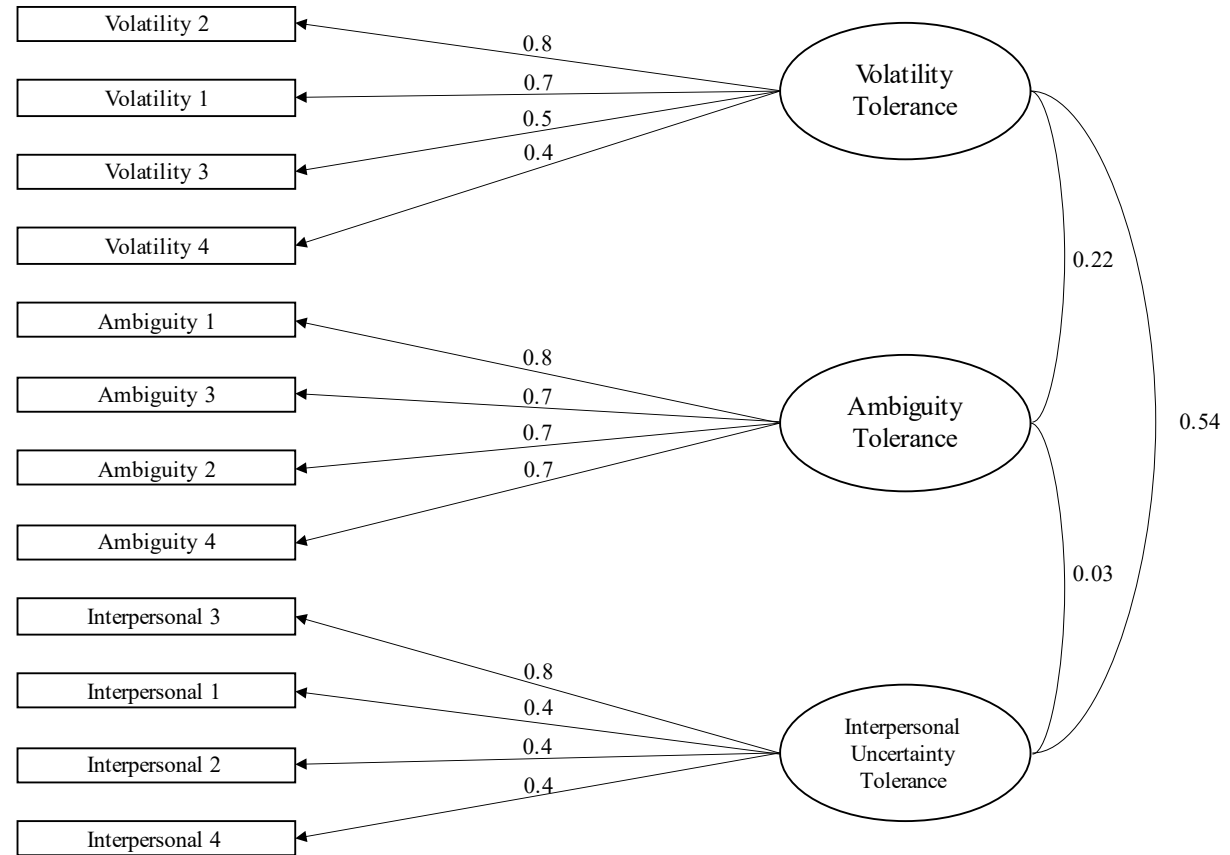
Figure 4

Refined 3 Factor Model of Workplace Uncertainty Tolerance

Note. Refined 3 factor model of workplace uncertainty tolerance in study 2.

Figure 5

3 Factor Model Comprising the Workplace Uncertainty Tolerance Scale

Note. Confirmatory factor analysis results of the refined 3 factor model of workplace uncertainty tolerance in study 3.

Appendix A

Full measure list

Demographics

- What is your age?

    o *Open-ended response with numerical input validation.*

- Which of the following best describes your gender?

    o Male

    o Female

    o Prefer to self-describe: _____

    o Prefer not to respond

- What is your race/ethnicity?

    o African-American/Black

    o Caucasian/White (Non-Hispanic)

    o Hispanic

    o Asian/Pacific Islander

    o Arabic

    o Native American

    o Other: _____

- Which of the following best describes which industry you work in?

  - o   Aerospace & Defense

  - o   Automotive

  - o   Banking

  - o   Chemicals

  - o   Consumer Products

  - o   Defense & Security

  - o   Engineering, Construction, & Operations

  - o   Healthcare

  - o   High Tech

  - o   Higher Education & Research

  - o   Industrial Machinery & Components

  - o   Insurance

  - o   Life Sciences

  - o   Media

  - o   Mill Products & Mining

  - o   Oil & Gas

  - o   Professional Services

- Public Sector

- Retail

- Sports

- Telecommunications

- Travel & Transportation

- Utilities

- Wholesale Distribution

- How many people work in your company?

  - 1 – 100

  - 101 – 500

  - 501 – 1000

  - 1001 – 5000

  - 5001 – 10,000

  - 10,001 – 50,000

  - 50,001 – 100,000

  - Greater than 100,000

  - I don't know

- Which of the following best describes the company function you work in?

- Corporate communications

- Customer service

- Finance

- General management

- Human resources

- Information technology

- Marketing

- Operations

- Product development

- Research

- Sales

- Supply chain and logistics

- Other [fill in the blank]

- What is your job title?

Socioeconomic status

Educational attainment

1. What is the highest level of school you have completed or the highest degree you

   have received?

   - Less than high school

- o   Some high school, no diploma

- o   High school graduate or equivalent

- o   Some college, no degree

- o   Associate's degree

- o   Bachelor's degree

- o   Master's degree

- o   Professional school degree

- o   Doctorate degree

Annual household income

2. Which category represents the total combined income of all members of your family
    (living in the same household) during the past 12 months? This includes money from
    jobs, net income from a business, farm or rent, pensions, dividends, interest, social
    security payments, and any other money income received by members of your family
    who are 15 years of age or older.

    - o   Less than $5,000

    - o $5,000 to $7,499

    - o $7,500 to $9,999

    - o $10,000 to $12,499

    - o $12,500 to $14,999

- $15,000 to $19,999

- $20,000 to $24,999

- $25,000 to $29,999

- $30,000 to $34,999

- $35,000 to $39,999

- $40,000 to $49,999

- $50,000 to $59,999

- $60,000 to $74,999

- $75,000 to $99,999

- $100,000 to $124,999

- $125,000 to $199,999

- $200,000 or more

Job tenure

3. How long in years have you been employed in your current job?

- *Open-ended response with numerical input validation.*

Organizational tenure

4. How long in years have you been employed in your current organization?

- *Open-ended response with numerical input validation.*

Risk taking propensity

Domain-Specific Risk-Taking (Adult) Scale (Blias & Weber, 2006)

For each of the following statements, please indicate the **likelihood** that you would engage in the described activity or behavior if you were to find yourself in that situation. Provide a rating from *Extremely Unlikely* to *Extremely Likely*, using the following scale:

_____

1	2	3	4	5	6	7
Extremely Unlikely	Moderately Unlikely	Somewhat Unlikely	Not Sure	Somewhat Likely	Moderately Likely	Extremely Likely

1. Admitting that your tastes are different from those of a friend. (S)

2. Going camping in the wilderness. (R)

3. Betting a day's income at the horse races. (F)

4. Investing 10% of your annual income in a moderate growth mutual fund. (F)

5. Drinking heavily at a social function. (H/S)

6. Taking some questionable deductions on your income tax return. (E)

7. Disagreeing with an authority figure on a major issue. (S)

8. Betting a day's income at a high-stake poker game. (F)

9. Having an affair with a married man/woman. (E)

10. Passing off somebody else's work as your own. (E)

11. Going down a ski run that is beyond your ability. (R)

12. Investing 5% of your annual income in a very speculative stock. (F)

13. Going whitewater rafting at high water in the spring. (R)

14. Betting a day's income on the outcome of a sporting event (F)

15. Engaging in unprotected sex. (H/S)

16. Revealing a friend's secret to someone else. (E)

17. Driving a car without wearing a seat belt. (H/S)

18. Investing 10% of your annual income in a new business venture. (F)

19. Taking a skydiving class. (R)

20. Riding a motorcycle without a helmet. (H/S)

21. Choosing a career that you truly enjoy over a more prestigious one. (S)

22. Speaking your mind about an unpopular issue in a meeting at work. (S)

23. Sunbathing without sunscreen. (H/S)

24. Bungee jumping off a tall bridge. (R)

25. Piloting a small plane. (R)

26. Walking home alone at night in an unsafe area of town. (H/S)

27. Moving to a city far away from your extended family. (S)

28. Starting a new career in your mid-thirties. (S)

29. Leaving your young children alone at home while running an errand. (E)

30. Not returning a wallet you found that contains $200. (E)

Note. E = Ethical, F = Financial, H/S = Health/Safety, R = Recreational, and S = Social.

General Risk Propensity Scale (GRiPS; Zhang et al., 2018)

- Taking risks makes life more fun

- My friends would say that I'm a risk taker

- I enjoy taking risks in most aspects of my life

- I would take a risk even if it meant I might get hurt

- Taking risks is an important part of my life

- I commonly make risky decisions

- I am a believer of taking chances

- I am attracted, rather than scared, by risk

Optimism

Life Orientation Test-Revised (LOT-R; Scheier et al., 1994)

- In uncertain times, I usually expect the best.

- It's easy for me to relax.

- If something can go wrong for me, it will.

- I'm always optimistic about my future.

- I enjoy my friends a lot.

- It's important for me to keep busy.

- I hardly ever expect things to go my way.

- I don't get upset too easily

- I rarely count on good things happening to me.

- Overall, I expect more good things to happen to me than bad.

Tenacity

Tenacity (adapted from Braum & Locke, 2004)

- I continue to work hard on tasks even when others oppose me.

- I can think of many times when I persisted with work when others quit.

- I work harder than most people I know.

- When something goes wrong, I immediately analyze the cause of the problem and take action.

<u>Feedback seeking</u>

Proactive feedback seeking behavior (Ashford & Black, 1996).

- To what extent have you sought feedback about your performance when completing work assignments

- To what extent have you sought feedback about your performance after completing assignments

- To what extent have you solicited critiques from your supervisor

- To what extend have you asked for your supervisors' opinion of your work

<u>Self-regulation</u>

The Desire for Self-Control scale (DSC; Uziel & Baumeister, 2017)

Instructions: Please mark your level of agreement with the following statement, which refers to what you WANT in your life in general.

In my life in general…

- I want to be more self-disciplined

- I want to be better able to concentrate on tasks

- I wish I had more control over my responses in stressful situations

- I want to be better able to resist temptations

- I want to be better able to hold back bad thoughts when they come to my mind

- I wish I had a better ability to change unwanted habits.

<u>Adaptive performance</u>

Creativity

- I do not hesitate to go against established ideas and propose an innovative solution.

- Within my department, people rely on me to suggest new solutions.

- I use a variety of sources/types of information to come up with an innovative solution.

- I develop new tools and methods to resolve new problems.

Reactivity in the face of emergencies

- I am able to achieve total focus on the situation to act quickly.

- I quickly decide on the actions to take to resolve the problem

- I analyze possible solutions and their ramification quickly to select the most appropriate one.

- I easily recognize my work to adapt to the new circumstances.

Interpersonal adaptability

- Developing good relationships with all my counterparts is an important factor for my effectiveness.

- I try to understand the viewpoints of my counterparts to improve my interactions with them.

- I learn new ways to do my job better in order to collaborate with such people.

- I willingly adapt my behavior whenever I need to in order to work well with others.

Training effort

- I undergo training on a regular basis at or outside of work to keep my competencies up to date.

- I am on the lookout for the latest innovations in my job to improve the way I work.

- I look for every opportunity that enables me to improve my performance (training, group project, exchanges with colleagues, etc.)

- I prepare for change by participating in every project or assignment that enables me to do so.

Handling work stress

- I keep my cool in situations where I am required to make many decisions.

- I look for solutions by having calm discussions with colleagues.

- My colleagues ask for my advice regularly when situations are difficult because of my self-control.

<center>Stress</center>

Job Stress Index (Bernas & Major, 2000)

- I work under a great deal of tension.

- I have too much work to do.

- My working environment is very stressful.

- I feel I cannot work long enough or hard enough.

- I feel stressed by my job.

- I feel as if I will never get all my work done.

- It makes me tense to think about my job.

- While at work, I feel there is too much pressure to get things done.

- I have unwanted stress as a result of my present job.

- I feel "burned-out" after a full day of work.

- The tension I feel at work makes me unhappy.

- My job is stressful.

Appendix B

Full content validation instructions

Please read the instructions very carefully. The questions are unique to survey measurement development and require detailed attention. Research projects in the management field often use survey items to measure work concepts, such as work motivation, job satisfaction, and employee stress.

When writing survey items, management researchers must take great care to ensure that the items do a good job of measuring the concepts of interest (e.g., that an item intended to measure work motivation really seems to capture that concept well).

The goal of this study is to assess survey items used in the management literature.

<page break>

Your job in this survey is to take each item in the left column and decide which concept it seems to best represent.

On the next few pages, you will see lists of items next to three boxes. Each box contains a term and corresponding definition.

For each item, drag and drop the item to the box that it best matches.

Please pay close attention to each individual item as you decide which term and definition it best matches.

<page break>

Before beginning the survey, below is an example to help guide your understanding of the survey.

Your job in this survey is to take each item in the left column and decide which concept it seems to best represent. Let's use the three concepts below as an example:

- **Work Motivation: The effort expended in relation to work.**
- **Job Satisfaction: The enjoyment of work and job tasks.**
- **Work Location: The location in which work is done.**

Based on the terms and definitions above, an item that does a good matching **Work Motivation: The effort expended in relation to work might** be "I work hard in my job," because it speaks to a certain effort level at work. An item that also does a good job matching this term and definition might be, "I often feel lazy at the office," because it also speaks to a certain effort level at work. So you would drag and drop items like those to the box associated with **Work Motivation: The effort expended in relation to work**.

Please note that some of the items on the survey will focus on high levels of a given concept (like the "I work hard" item), whereas others will focus on low levels of a given concept (like the "I often feel lazy" item)—both can capture the concept of expending effort equally well.

An item that does a good matching **Job Satisfaction: The enjoyment of work and job tasks** might be "I like coming to work," because it speaks to a certain enjoyment level at work. An item that also does a good job matching this term and definition might be "I think my job is boring," because it also speaks to a certain enjoyment level at work. So you would drag and drop items like those to the box associated with **Job Satisfaction: The enjoyment of work and job tasks.**

What about an item like "I work in a city?" That item doesn't seem to have much to do with **Work Motivation: The effort expended in relation to work**, so you wouldn't drag it to that box. That item also doesn't seem to have much to do with **Job Satisfaction: The enjoyment of work and job tasks**, so you wouldn't drag it to that box either. It does seem to match **Work Location: The location in which work is done**, so that would be the box you would drag that item to.

Please note that some of the items on the survey will seemingly match more than one term and definition. However, your job is to determine which definition the item best matches.

<page break>

LETS PRACTICE!

There are nine items in the stack below. Using the example above, drag and drop each item into the box with the term and definition it best matches.

Nine items included:

- I like coming to work

- I work in a city

- I think my job is boring

- I work in a tall building

- I often feel lazy at the office

- My work tasks are fun

- I lack energy when working

- I work in a basement

- I work hard in my job

<Note: If participants drug and dropped any of the items into the inappropriate box, they were shown the error message: "Uh oh! Looks like you got something wrong. Please reread the directions and check your answers. >

<page break>

It is time to begin the real survey. On the next few pages you will be asked to take each item in the left column and decide which concept it seems to best represent.

Also, please note that there will be a few questions that check how closely you're paying attention. Be sure to respond to these questions based on their directions.

<page break>

Below are the four concepts that you will be matching items. Please take the time to read these carefully. You must stay on this page for 45 seconds.

Job uncertainty tolerance: preference for detailed directions for competing job tasks

Organizational uncertainty tolerance: preference for detailed directions in navigating an organization's policies, procedures, and cultures

Peer social uncertainty tolerance: preference for structured and predictable social interactions with work peers

Supervisor social uncertainty tolerance: preference for structured and predictable social interactions with a work supervisor

<participants must have stayed on this page for 45 seconds>

<page break>

Please drag and drop each item into the box with the term and definition it best matches.

- **Job uncertainty tolerance: preference for clarity and structure for competing job tasks**

- **Organizational uncertainty tolerance: preference for clarity and structure in navigating an organization's policies, procedures, and cultures**

- **Peer social uncertainty tolerance: preference for structured and predictable social interactions with work peers**

- **Supervisor social uncertainty tolerance: preference for structured and predictable social interactions with a work supervisor**

Unstructured work energized me	Job uncertainty tolerance	Organizational uncertainty tolerance
	Peer social uncertainty tolerance	Supervisor social uncertainty tolerance