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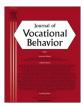
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The uncertain state of work in the U.S.: Profiles of decent work and precarious work[☆]



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ABSTRACT

This research utilized a person-centered approach to identify profiles of decent work and precarious work, which were explored due to their centrality in current debates about the uncertain state of work conditions in the U.S. Using the Decent Work Scale and the Precarious Work Scale, the following five profiles were identified from a sample of 492 working Americans: 1) Indecent-Precarious; 2) Highly Decent; 3) Low Health Care-Low Rights; 4) Vulnerability-Dominant; 5) Health Care-Stability. These profiles were further elaborated by examining the relationship of theoretically-informed predictors and outcomes that would distinguish profile membership. Using psychology of working theory as an organizing framework for determining predictors and outcomes, the findings revealed that work volition, age, income level, and educational level significantly predicted profile membership, and autonomy, social contribution, survival needs, job satisfaction, and life satisfaction differed meaningfully across the profiles. Implications for theory, research, practice, and public policy are discussed highlighting the complexity of work conditions and their relationship to various aspects of vocational and psychological functioning.

1. Introduction

Considerable research has documented the complex ways in which diverse working conditions influence and shape mental health, well-being, and psychosocial functioning (Blustein, 2019; Paul & Moser, 2009; Swanson, 2012). Two specific dimensions of working— the decent-indecent continuum and the precarious-stable continuum (e.g., Duffy et al., 2017; International Labor Organization [ILO], 2008; Kalleberg & Vallas, 2017; Standing, 2014)—have attracted interest as scholars and policy-makers seek to understand how these particular work conditions function in relation to psychological, vocational and systemic contexts. For example, individuals who face harsh work environments tend to struggle with meeting their survival needs, and often experience psychological and health-related challenges related to work (Blustein, 2019; Kalleberg, 2018; Paul & Moser, 2009). The importance of examining the predictors and outcomes of diverse work conditions is probably best exemplified by the massive unemployment that is gripping the world during the COVID-19 crisis. The vulnerability of workers to the harsh reality of extensive job losses underscores the importance of understanding the nature and potential consequences of diverse working conditions. For example, many

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individuals who had decent working conditions with more stability were able to continue to work remotely, while others in more precarious positions were more likely to be laid off or forced to work in unsafe conditions (ILO, 2020). While the data from the present study were obtained prior to the crisis, the sophisticated analysis of work conditions presented in this study provides a valuable opportunity to examine the nature of work prior to the onset of the pandemic. Optimally this study can inform research, practice, and public policy efforts needed to manage the current work-based crises as well as long-standing inequality within the U.S. workforce.

In this study, we use a person-centered perspective (Perera et al., 2019; Williams & Kibowski, 2016) to identify unique subpopulations among Americans working in distinct configurations of decent work and precarious work. Much prior research on the
nature of work has examined the unique and additive effect of the decent work and precarious work dimensions on such outcomes as
job satisfaction and well-being (Blustein, 2019; Duffy et al., 2017; Kalleberg & Vallas, 2017). In contrast, we adopt a view that
workers may perceive differential degrees of work conditions simultaneously (e.g., perceptions of access to health care in the absence
of adequate compensation and a lack of workers' rights). Building on the conceptual framing from psychology of working theory
(PWT; Blustein, Kenny, Di Fabio, & Guichard, 2019; Duffy et al., 2016), we explore the relationship among profiles of decent work
and precarious work in relation to theoretically-informed predictors and outcomes with the intention of deepening knowledge about
the nature of work among contemporary workers in the U.S.

1.1. Conditions of work: the critical role of decent work and precarious work

Work conditions vary considerably across a wide range of factors, including, but not limited to differential access to education, training, and decent jobs; macro-level economic trends; legal protections for workers; interpersonal and relational factors among coworkers and supervisors; and marginalization and discrimination (Blustein, Kenny, Di Fabio et al., 2019; Kalleberg & Vallas, 2017). These differences are particularly evident in both decent work and precarious work. Our decision to focus on these particular dimensions of work reflects a troubling reality within the U.S. and many other regions of the world wherein employers are increasingly controlling both access to, and the actual conditions of, work, leaving people in situations that may be indecent and precarious (Kalleberg, 2018). By exploring the nature of these particular conditions of work coupled with their relationships to theoretically-informed predictors and outcomes, we have an opportunity to unpack some of the inherent consequences of inequity in the workplace.

1.1.1. Decent work

The International Labor Organization (ILO; ILO, 2008), which is a multinational institution that has been in existence since 1919, has advanced the notion of decent work as a means of defining the minimum acceptable standards for workers across the globe. Based on input from governments, labor unions, and employers, decent work has been defined as consisting of five components: safe work environment, access to health care, adequate earnings, hours that allow for free time and rest, and organizational values that are congruent with family and social values (Duffy et al., 2017; ILO, 2008). Although this definition of decent work includes some attributes of meaningful and satisfying work (such as the values congruence factor), the ILO's decent work agenda focuses primarily on defining the baseline of acceptable working conditions with respect to human rights (Blustein, Kenny, Di Fabio, & Guichard, 2019).

From a macro-level perspective, decent work has been defined by economic indicators, which has revealed widespread deficits that are particularly problematic for young workers, women, and individuals with disabling conditions (Ghai, 2003; ILO, 2019). Studies by the ILO have underscored that lack of decent work is associated with poverty, child labor, gender-based discrimination, and compromised workplace safety (e.g., ILO, 2019). From a psychological perspective, recent initiatives have broadened conceptual definitions of decent work (Blustein & Duffy, 2021). Duffy and colleagues (Duffy et al., 2017) developed a measure of decent work that is based on the aforementioned five-component definition offered by the ILO (2008, 2012). Initial research on the Decent Work Scale (DWS; Duffy et al., 2017) has yielded a bi-factor model that provides both a general score and scores for each of the five factors, which reflect the aforementioned attributes of decent work. Research using the DWS across numerous populations and regions of the globe has revealed that it is predictive of adults having greater opportunities for meeting their needs for survival, social contribution, and self-determination, as well as work fulfillment and well-being (see Blustein & Duffy, 2021, for a review).

1.1.2. Precarious work

The second dimension is precarious work, which refers to work that is temporary, insecure, or part-time, often poorly paid, typically without benefits, and with minimal social or legal protections (Kalleberg & Vallas, 2017; Standing, 2014). Precarious work has been a common feature of labor markets across the globe to varying degrees and with diverse impacts on specific sub-populations. Precarious work has increased during economic downturns; it also has had a particularly aversive impact among marginalized groups, including women, immigrants, and racial and ethnic minorities (see Kalleberg & Vallas, 2017 for a discussion of precarious work through the lens of race and gender). Modern precarity is notable in its expansion to all sectors of the economy, including occupations that were historically viewed as secure, such as jobs in manufacturing, retail, and management consulting (Hyman, 2018; Kalleberg, 2018). Many workers are now facing job insecurity not as a transient condition, but as a prevailing characteristic of their work lives (Kalleberg, 2018). Moreover, concerns about the growth of precarious work are growing due to the potential for major changes in the workforce related to the pandemic (Blustein et al., 2020).

Empirical research has documented the aversive consequences of precarious work on physical and psychological health as well as one's capacity to developmentally progress in life (for example, being able to marry and become autonomous adults) without the

security and resources associated with stable employment (see Kalleberg, 2018 for a review). Similar to the decent work scale, a psychometric conceptualization of precarious work has been proposed by Vives and colleagues (Employment Precariousness Scale; EPRES: Vives et al., 2010; Vives et al., 2013). From this perspective, precarious work encompasses the following quantifiable dimensions of perceived employment precarity: vulnerability, inadequate wages, inadequate rights, and inability to exercise rights. Vives et al. (2013) define the constructs within the EPRES as follows: vulnerability refers a lack of power and agency to advocate for better conditions; inadequate wages refers to the perception of inadequate compensation; inadequate rights refers to the absence of family leave, severance pay, pension, and unemployment benefits; inability to exercise rights refers to limitations in one's capacity to take time off for vacations or being ill. Consistent with macro-level research and theoretical expectations, individuals with greater exposure to employment precarity reported lower levels of job satisfaction as well as higher levels of psychological and physical health problems (Vives et al., 2013).

1.1.3. Integration of decent work and precarious work

Individuals may simultaneously perceive differential degrees of distinct decent work and precarious work conditions, constituting an integration of their perceived working conditions. This perspective posits that distinct configurations of decent work and precarious work may emerge, indicating the presence of latent subgroups within a heterogeneous population. However, this proposed population heterogeneity has not been systematically investigated in prior work on decent work and precarious work. Indeed, previous work, with few exceptions (Kim et al., 2020), has adopted a variable-centered approach to examining decent work and precarious work, which inherently assumes that all individuals in a sample belong to the same population and share the same set of (averaged) estimates. However, this assumption of homogeneity is rarely directly tested; and, if such homogeneity is untenable, average effects may not be appropriate for any individual in the sample (Wang & Peck, 2013).

A person-centered approach may be more informative for investigating how the perception of decent work and precarious work conditions interact holistically within individuals to influence salient outcomes. From a conceptual standpoint, individuals may perceive differential levels of decent work and precarious work in their work lives; however, the revelation of latent profiles within the data would suggest that a combination of these beliefs plays an important role in influencing individuals' work outcomes. For example, individuals who perceive adequate compensation and safe working conditions may simultaneously not have access to time for rest or adequate healthcare. Such a configuration of decent work and precarious work conditions may have distinct outcomes compared to those individuals with a different configuration of perceived conditions (e.g., a combination of safe conditions and access to time for rest but inadequate compensation and access to healthcare). A prior investigation by Kim et al. (2020) demonstrated the applicability of profile analysis to studies of working conditions by identifying the prominent role of access to health care across several profiles of decent work, underscoring the long-standing complication of providing health insurance via employment. However, to adequately represent a more comprehensive range of work conditions, it is necessary to consider both precarious work and decent work, which together reflect fundamentally important attributes of the current labor market. Accordingly, we conducted a latent profile analysis of decent work and precarious work to identify sub-groups of individuals who are experiencing coherent configurations of working conditions. The identification of these profiles can elaborate and deepen understanding of the predictors and outcomes of diverse working conditions, optimally informing practice and public policy.

1.2. Theoretical framework: psychology of working theory

Examining the impact of conditions of work on psychological and vocational functioning requires a broad theoretical framework that encompasses both macro-level and individual-level factors. We have elected to use psychology of working theory (PWT; Blustein, 2006, Duffy et al., 2016), which focuses on the work lives of all who work and who want/need to work. PWT delineates how people navigate a broad array of work-related tasks, including managing survival needs, contributing to the social world, relating to others via work, and creating self-determined lives of meaning, autonomy, and authenticity (Blustein, 2006; Duffy et al., 2016). PWT describes how contextual barriers like marginalization and economic constraints are tied to individuals' ability to choose their work and their ability to adapt to the changing world of work (Blustein, 2006).

Recent innovations in PWT have operationalized these propositions, resulting in the development of a linear theoretical model (Duffy et al., 2016). The model asserts the influence of macro-level factors, including marginalization and economic constraints, on work volition and career adaptability. Work volition and career adaptability are then thought to shape one's access to decent work. To the extent that work conditions provide a means to fulfill needs for survival, social connection/contribution, and self-determination, individuals are more likely to experience positive outcomes, such as increased work fulfillment and well-being. As summarized in Blustein and Duffy (2021), studies examining the PWT model have revealed that "marginalization experiences, indicators of economic constraints/resources, and work volition all appear to be consistent direct or indirect predictors of decent work" (p. 29). Extant research also supports the propositions that decent work provides access to need fulfillment, which then facilitates positive outcomes (see Blustein & Duffy, 2021). In this study, we use PWT to model the relationship of work conditions to predictor and outcome variables.

1.3. Predictors of profile membership

Diverse factors and conditions undoubtedly contribute to the expansive range of work-based challenges and resources. Economic constraints, such as limited financial means and social capital, negatively predict access to decent and stable work (Duffy et al., 2016). Financial constraints may restrict an individual's access to career development resources, such as education and training,

whereas a dearth of social capital entails a lack of networks and cultural knowledge that similarly decreases availability of decent and stable work (Shah et al., 2012). Education level represents an accumulation of social capital, which PWT scholars posit as a mechanism by which economic resources relate to decent work (Diemer et al., 2013; Duffy et al., 2016). Income and education level serve as measures of economic resources in the current study, as scholars have recommended these indicators for cross-national comparisons and for making policy recommendations (Diemer et al., 2013). Consistent with PWT, we investigated the relationship of education and income with the distinct configurations of decent and precarious work conditions.

Along with economic constraints, PWT positions marginalization, resulting from historically oppressed social identities, as the other major macro-level predictor of stable and decent work (Duffy et al., 2016). In this exploratory study, we looked specifically at gender-based marginalization as a potential predictor of profile membership. (We acknowledge the importance of other social identities as marginalizing or privileging forces; however, our sampling process did not provide sufficient variability to explore additional identities such as race or sexual identity.) Previous research reveals that marginalization due to sexism infiltrates access to education, training, and workplace policies, leading to lower pay, promotion rates, unfriendly leave policies, and negative psychological and health consequences (Heppner, 2013). Therefore, we expect that women will be more likely to be represented in profiles characterized by lower decent work and higher precarious work conditions.

Work volition is the perception of choice in career decision-making and represents both a malleable psychological construct, as well as a perception shaped by real barriers (Duffy et al., 2012). Studies utilizing PWT have yielded empirical support for work volition positively predicting access to decent work (Douglass et al., 2017; Smith et al., 2020). Given the role of work volition in promoting positive vocational outcomes (Duffy et al., 2015; Smith et al., 2020), work volition may prove facilitative in navigating access to decent work. The current study proposes that individuals with higher levels of work volition will be more likely to be found among profiles characterized by access to decent and stable work.

Similar to gender identity, age discrimination for older adults may interfere with access to decent and stable work (e.g., Kalleberg, 2018). At the same time, younger generations, who are newly entering the workforce, may be more susceptible to current trends associated with precariousness, such as contract work and the gig economy, and therefore, more likely to engage in precarious work (Kalleberg, 2018). Given these varying vulnerabilities among different age groups, the current study adopts an exploratory approach to the relationship between age and conditions of work, with the intention of deriving evidence-based inferences about how age functions in conjunction with decent and precarious work.

1.4. Outcomes of profile membership

Once we identify specific configurations of work conditions, we can then discern how these profiles may be related to distinct outcomes in vocational and psychosocial functioning. PWT (Blustein & Duffy, 2021; Duffy et al., 2016) asserts that optimal work conditions provide a context for individuals to fulfill an array of psychological needs, leading to enhanced well-being. Having identified configurations (profiles) of work conditions, we use the PWT taxonomy of needs, which includes survival, competence, relatedness, autonomy, and social contribution to discern how specific profiles may be related to distinct outcomes in vocational and psychosocial functioning.

A key component of PWT is the application of self-determination theory (SDT; Ryan & Deci, 2002), which has been used to frame how people motivate themselves and find meaning, authenticity, and autonomy in their work lives (Blustein, 2006). SDT incorporates psychological needs, behavioral regulation, and the pursuit of psychological well-being in its explanation of human behavior (Ryan & Deci, 2002). Broadly, SDT suggests that people are motivated by three basic needs: competence, relatedness, and autonomy (Ryan & Deci, 2002). In accordance with SDT, we posit that access to contexts that provide opportunities for fulfilling these basic needs is essential for the development of self-determined and authentic engagement in a given set of tasks, such as working. Competence refers to the need to learn the requisite skills for a given environment, which optimally results in mastery (Autin et al., 2019; Ryan & Deci, 2002). Relatedness captures the human striving for connection with others and the opportunity to care for and be cared for in various contexts, including work (Autin et al., 2019; Ryan & Deci, 2002). Autonomy is defined as the need for control over one's life and trajectory (Ryan & Deci, 2002).

In the development of PWT, a comprehensive needs satisfaction measure has been developed (Autin et al., 2019; Work Needs Satisfaction Measure; WNSM), which integrates needs identified in initial PWT formulations (Blustein, 2006) with needs that are highlighted in SDT (Ryan & Deci, 2002). Research emerging from the Autin et al. (2019) scale development project and from previous scholarship has affirmed the connection between decent and stable work conditions and need fulfillment. For example, the measure of survival developed by Autin et al. (2019) is associated with Maslow's safety and security needs; similarly, the work-based measures of self-determination needs (competence, relatedness, and autonomy) were associated with generic measures of these constructs, but were sufficiently distinct to capture the important work-based features of PWT. Social contribution needs were related to prosocial intention, underscoring the important needs that working can optimally fulfill. Research has identified links between having these self-determination needs being met and greater levels of life satisfaction and energy (e.g., Van den Broeck et al., 2008). When considered collectively, we expect that individuals who have access to decent and stable work will also be able to fulfill these fundamental human needs.

Considerable research has identified theoretically predictable connections between the needs satisfaction measures, indices of well-being and various aspects of the working context (see Duffy et al., 2016, for a review). Given the prevailing research that identifies the positive attributes of decent and stable work, we expect that these working conditions will be positively related to need fulfillment and well-being.

1.5. The present study

This study offers a significant opportunity to explore the nature of diverse work conditions and their relation to theoretically-informed predictors and outcomes. The first objective of this study is to identify distinct profiles based on scores from the DWS and EPRES; once these profiles have been identified, we explore the relationships between these profiles and the predictors and outcomes that we have identified. Given that the analysis will reveal new, latent configurations of working conditions, we could not rely on a foundation of prior research to propose specific hypotheses for each variable; as such, the study adopts an exploratory approach, consistent with this methodology to explore the following research questions:

RQ #1: Are there quantitatively and qualitatively distinct profiles of individuals' perceptions of decent and precarious work? RQ#2: Can profile membership be predicted by work volition, gender, age, educational level, and income?

RQ#3: Do competence, relatedness, autonomy, survival, and social contribution needs satisfaction, as well as job satisfaction and life satisfaction, differ across the profiles?

2. Methods

2.1. Participants

This study's sample consisted of 492 adults with a mean age of 34.61 years (SD = 9.81). Eight participants (1.6%) did not report their age. Two hundred and ninety-nine participants identified as male (61%), 182 participants identified as female (37%), two participants identified as transgender (0.004%), two participants identified as other (0.004%), and seven participants did not identify their gender (0.014%). Three hundred fifty-five participants identified as White/European American/Caucasian (72.2%), 55 as Black/African-American (11.2%), 26 as Asian/Asian-American (5.3%), 24 as Hispanic/Latinx American (4.9%), six as American Indian/Native American/First Nation (1.2%), three as Asian Indian (0.6%), and 15 as multi-ethnic (3.1%). Eight participants (1.6%) did not report their race/ethnicity. Regarding income, participants reported that their incomes ranged from less than \$25,000/year to over \$201,000/year. The distribution of incomes was as follows: less than \$25,000 (n = 58, 11.8%), \$25,000-\$50,000 (n = 166, 33.7%), \$51,000-\$75,000 (n = 137, 27.8%), \$76,000-\$100,000 (n = 72, 14.6%), \$101,000-\$125,000 (n = 18, 3.7%), \$126,000-\$150,000 (n = 12, 2.4%), \$151,000-\$175,000 (n = 10, 2.0%), \$176,000-\$200,000 (n = 7, 1.4%), \$201,000+ (n = 3, 0.6%). The modal income range (33.7% of participants) was between \$25,000/year and \$50,000/year. Nine participants (1.8%) did not report their income. Participants reported that their highest level of education obtained was less than high school (n = 1, 0.2%), some high school (n = 6, 1.2%), high school graduate (n = 57, 11.6%), vocational school (n = 21, 4.3%), some college (n = 120, 24.4%), college degree (n = 235, 47.8%), and professional degree (n = 44, 8.9%). Eight (1.6%) participants did not report their highest level of education.

2.2. Measures

2.2.1. Decent work scale

Duffy and colleagues' 15-item measure of decent work is based on the five-component definition offered by the ILO (2008, 2012). The Decent Work Scale (DWS; Duffy et al., 2017) has yielded a bi-factor model that provides both a general score (i.e., the total score) and scores for each of the five factors identified in the Introduction (safe conditions; access to health care; adequate compensation; time for rest; congruent values with employer). High scores on the DWS reflect greater levels of decent work. Research using the DWS has revealed excellent reliability for the subscales and general score. Also, the DWS is predictive of adults having greater opportunities for meeting their needs for survival, social contribution, self-determination as well as work fulfillment and well-being (see Blustein & Duffy, 2021, for a review). Score reliability estimates in this sample are shown in Appendix D.

2.2.2. Precarious work scale

Vives et al. (2010) have developed a multidimensional psychometric measure of employment precariousness (EPRES). For the current study, we relied on the vulnerability (5 items), inadequate wages (2 items), inadequate rights (6 items), and inability to exercise rights (5 items) subscales, which are most consistent with prevailing definitions of precarious work (Kalleberg, 2018). We did not use the other two subscales of the EPRES (Temporariness and Disempowerment) because they were open-ended questions and were not readily quantifiable. The remaining four subscales, which result in interval data, provide a sound representation of precarious work (cf. Kalleberg, 2018). High scores on the EPRES reflect greater levels of precarity. Research on the EPRES found the measure to have good internal reliability (Vives et al., 2010); moreover, research has found that scores on the EPRES were associated with various health and psychosocial indices, thereby supporting theoretically-derived inferences about the validity of the measure. Score reliability estimates in this sample are shown in Appendix D.

2.2.3. Work volition

We used the 4-item Volition subscale from the Work Volition Scale (WVS; Duffy et al., 2012), which provides a brief and conceptually rigorous way of assessing this construct. Higher scores on this subscale correspond to higher levels of work volition. Evidence of reliability and validity have been obtained via studies that have demonstrated the internal consistency and stability of the Volition subscale and its relationships to related constructs, such as barriers and sense of control (e.g., Douglass et al., 2017; Kim et al., 2020). The score reliability estimate in this sample is shown in Appendix D.

2.2.4. Work need satisfaction

The 20-item Work Need Satisfaction Scale (WNSS; Autin et al., 2019) includes the prompt, "My work allows me to..." followed by phrases that capture the five needs detailed in the revised PWT needs taxonomy: survival needs, social contribution needs, and self-determination needs (competence, relatedness, autonomy). The scale contains five 4-item subscales assessing each of the aforementioned needs. Evidence supporting the reliability and validity of this measure has been detailed by Autin et al. (2019) who has identified correlations between the specific subscales from the WNSS and related measures of work fulfillment and well-being. Higher scores on the WNSS reflect greater levels of need fulfillment. Score reliability estimates in this sample are shown in Appendix D.

2.2.5. Life satisfaction

The Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a 5-item measure of one's overall level of satisfaction with life. Example items include, "In most ways my life is close to my ideal" and "If I could live my life over, I would change almost nothing." Higher scores on the SWLS reflect greater satisfaction with life. Extensive evidence supporting the reliability and validity of the SWLS has been summarized by Pavot and Diener (2009). The score reliability estimate in this sample is shown in Appendix D.

2.2.6. Job Satisfaction Scale

The Job Satisfaction Scale (JSS; Judge et al., 1998) is a 5-item scale based on the Brayfield-Roth Job Satisfaction Index (Brayfield & Rothe, 1951) and measures how satisfied participants were with their current jobs. High scores on the JSS reflect greater levels of job satisfaction. Sample items included, "Most days I am enthusiastic about my work" and "I find real enjoyment in my work." Evidence supporting the internal consistency and validity of the JSS has been reported in prior research; for example, the JSS has been associated with core self-evaluations and perceptions of work characteristics (Judge et al., 1998). The score reliability estimate in this sample is shown in Appendix D.

2.3. Procedure

Participants were surveyed through Amazon's Mechanical Turk (MTurk), an online data collection platform that allows people to complete surveys for payment. Recent investigations into the representativeness of MTurk samples have supported that this platform offers a means of surveying samples that are often more diverse than undergraduate samples (e.g., Casler et al., 2013). This platform was also advantageous for use in the present study as it enabled us to collect data in a timely fashion and to specifically request participation from individuals who have experienced some instability in their working lives. The study was announced with the statement: "You are being asked to participate in a research study to understand people's experience of working in the United States, particularly those who are struggling in obtaining stable work.' In order to be eligible to participate in this study, participants had to be 1) above the age of 18 years, 2) currently employed at least part-time, and 3) living and working within the United States. Those who chose to participate and met study criteria, were directed to a survey in Qualtrics, which contained an initial informed consent page followed by the survey itself. Participants were compensated \$3 for completing the survey, which took approximately 20–25 min. After they completed the survey, participants were presented with a code to enter that enabled them to receive payment. This study was approved by our university Institutional Review Board (IRB).

Recent studies on the use of Mechanical Turk (MTurk) have suggested that this method of data collection is at least as valid as other online data collection platforms (Buhrmester et al., 2011; Hauser & Schwarz, 2016). However, critics suggest that those taking online surveys for payment may offer responses at random and leave a large proportion of survey items blank, leading to issues with data validity. To mitigate these concerns, we included 4 items that assessed whether participants were paying attention and taking the survey seriously (e.g., "Please select agree if you are paying attention"). Data from participants who failed one or more validity checks were not included in the study sample.

2.4. Statistical analyses

Analyses were conducted in four phases. First, preliminary bifactor structural equation modeling (B-ESEM) analyses of the joint Decent Work Scale (DWS) and Employment Precariousness Scale (EPRES) data were conducted to obtain factor scores on the decent work and precarious work dimensions to serve as mixture indicators. Factor score indicators from a B-ESEM model were used as they (a) give greater weight to more reliable items and (b) can accommodate construct-relevant multidimensionality due to the presence of both general and specific constructs and item fallibility as is expected in the decent work and precarity data (see e.g., Duffy et al., 2017). We jointly modeled the decent work and precarious work data because, from a psychological perspective, a complete representation of individuals' perceptions of contemporary work conditions requires the simultaneous consideration of both these constructs (Blustein et al., 2016). However, a challenge for the representation of these constructs in the same model is the appropriate dimensional structure. Theorization on the structure of decent work posits the presence of both generality and specificity in these data (Duffy et al., 2017). From this perspective, decent work data reflect a general overarching perception of decent work, representing a gestalt of perceptions of decent work conditions (Blustein et al., 2016; Duffy et al., 2016). In addition, specificities exist that reflect perceptions of distinct components of decent working conditions including (a) safe working conditions, (b) free time and adequate rest provisions, (c) organizational values that align with family and social values, (d) adequate compensation, and (e) access

¹ See Supplemental Appendix A for the rationale for this B-ESEM specification.

to adequate health care (Duffy et al., 2017).

Precarious work is also a critical component of individuals' perceptions of work conditions and should be considered alongside decent work in order to provide a full representation of perceptions of work conditions. Precarious work is theorized to be multidimensional (Benach et al., 2014) involving, inter alia, perceptions of vulnerability, inability to exercise rights, inadequate wages, and inadequate employment rights. Specific precarious work perceptions may exist above and beyond global decent work perceptions. For example, an individual may perceive their work as somewhat decent in general quite apart from perceiving some level of vulnerability. Accordingly, to best represent the generality and specificities expected in the decent work and precarious work data as a reflection of perceptions of contemporary work conditions, we proposed a bifactor model with (a) a general decent work factor indexed by the DWS items primarily and EPRES items secondarily and (b) specific safe conditions, access to healthcare, adequate compensation, values, vulnerability, inadequate wages, inadequate rights, and inability to exercise rights factors. Further details of the specification, estimation, and evaluation of this preliminary B-ESEM model are reported in Appendix A.

Addressing RQ#1, Phase 2 of the analysis involved latent profile analyses (LPA) with factor scores from the retained measurement model. Models including one to seven profiles were estimated. Across the models, means of the profile indicators were freely estimated but indicators variances were equality constrained across the profiles. These analyses were performed using robust maximum likelihood (MLR) estimation in Mplus 8.0. The models were estimated using 10,000 random sets of start values with 500 iterations each and the 500 best solutions retained for final stage optimization (Morin et al., 2016). An inclusive approach to model selection was used, involving an evaluation of the theoretical consistency of solutions, information criteria, and the Bootstrap Likelihood Ratio Test (BLRT) (Henson et al., 2007; Nylund et al., 2007). In particular, the Bayesian Information Criterion (BIC), the sample-adjusted BIC (Sa-BIC), and the Consistent Akaike Information Criterion (CAIC) were used with lower values suggesting a better-fitting model (Henson et al., 2007). It should be noted that, though the BIC, SaBIC, and CAIC are useful in deciding on the optimal number of profiles, in even moderately-large samples, these criteria can continue to decrease with the addition of profiles. In this case, "elbow plots" of the information criteria can be useful in detecting the point at which the criteria plateau. The BLRT provides a test of a k-profile model against a k-1 profile model where k is the number of profiles. A non-significant p-value for the BLRT indicates that a more parsimonious k-1 profile model should be retained.

The final two phases of the analyses involved tests of the predictors and outcomes of profile membership. Phase 3, addressing RQ#2, involved tests of work volition, gender, age,⁵ educational level, and income as predictors of profile membership. These predictive relations were estimated using the three-step approach for LPA with covariates, operationalized via the auxiliary R3STEP option in Mplus (Asparouhov & Muthén, 2014). In Phase 4, addressing RQ#3, we examined PWT needs satisfaction (i.e., survival needs, social contribution needs, and self-determination needs), job satisfaction, and life satisfaction as outcomes of profile membership.⁶ The test of this LPA model with distal outcomes was conducted using Bolck-Croon-Hagenaars (BCH; Bakk & Vermunt, 2016) method. This approach was operationalized via the BCH function in Mplus. Missing data and their handling are described in Supplemental Appendix C.

3. Results

3.1. Preliminary measurement model

The test of the B-ESEM model of the joint DWS and EPRES data resulted in an excellent fit to the sample data, χ^2 (266) = 413.815, p < .001, CFI = 0.996, TLI = 0.992, RMSEA = 0.034 (90% CI = 0.027, 0.040). Detailed results of this analysis are reported in Appendix A, and Appendix D shows the means, standard deviations, and correlations for the decent work and precarious work factor score indicators as well as the factor score predictor and distal outcome variables.

3.2. Latent profile analyses

Table 1 shows the fit indices for the LPA models. The BLRT was not useful for selecting the optimal solution. The SaBIC, BIC, and CAIC continued to decrease with the addition of profiles. Notably, the BIC and CAIC reached a plateau around five profiles, and the

² Adequate Compensation from the DWS and Inadequate Wages from the EPRES are distinguishable constructs and should be treated as such in model specifications. Whereas adequate compensation reflects perceptions that one is appropriately paid for and rewarded for their work inadequate wages reflects perceptions that one is not sufficiently compensated to meet basic needs and cover unexpected expenses.

³ Alternative models freely estimating indicator variances in each profile were also estimated; however, these models tended to converge on inadmissible solutions or failed to converge altogether, suggesting over-parameterization of the models (Bauer & Curran, 2003).

⁴ The Akaike Information Criterion was also reported for informational purposes.

 $^{^5}$ Gender was modeled as a binary variable (0 = male, 1 = female); Age was modeled as an ordinal variable with five categories (0 = 18–25, 1 = 26–34, 2 = 35–44, 3 = 45–54, 4 = 55 and above); Educational level was modeled as an ordinal variable with seven categories (0 = less than high school, 1 = some high school, 2 = high school graduate, 3 = trade/vocational school; 4 = some college; 5 = college degree; 6 = professional degree); Income was modeled as an ordinal variable with nine categories (0 = less than \$25,000; 1 = \$25,000–\$50,000, 2 = \$51,000–\$75,000, 3 = \$76,000–\$100,000, 4 = \$101,000 - \$125,000, 5 = \$126,000 - \$150,000, 6 = \$151,000–\$175,000, 7 = \$176,000–\$200,000, 8 = \$201,000+). The work volition predictor was generated as factor sores from a one-factor measurement model of four indicators from the Work Volition Scale (see Methods section and Supplemental Appendix B)

⁶ The observed distal outcomes incorporated herein were generated as factor scores from latent variable measurement models (see Appendix B).

Table 1Fit indices and entropy for the LPA models

	k	LL	#fp	AIC	BIC	SaBIC	CAIC	BLRT	Entropy
1-Profile	1	-5098.494	20	10236.987	10320.957	10257.477	10340.958	_	_
2-Profile	2	-4956.566	31	9975.133	10105.285	10006.891	10136.285	< .001	.838
3-Profile	3	-4858.868	42	9801.735	9978.072	9844.764	10020.072	< .001	.832
4-Profile	4	-4782.074	53	9670.147	9892.666	9724.445	9945.667	< .001	.828
5-Profile	5	-4715.923	64	9559.847	9828.549	9625.414	9892.5486	< .001	.828
6-Profile	6	-4656.302	75	9462.605	9777.491	9539.441	9852.490	< .001	.852
7-Profile	7	-4614.016	86	9400.033	9761.102	9488.138	9847.101	< .001	.862

Note. k = number of profiles; #fp = number of free parameters; LL = mode log-likelihood; AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; SaBIC = sample-size adjusted BIC; CAIC = Consistent Akaike Information Criterion.

SaBIC also showed evidence of flattening out at this point. Estimation of a sixth profile resulted in considerably smaller class sizes as well as an additional profile that was not well differentiated in terms of shape effects from the existing profiles. The five-profile solution and adjacent four-and-six profile solutions were uniformly statistically admissible. For the five-profile solution, average latent profile probabilities for the most likely latent profile assignment ranged from 0.872 to 0.936 (M = 0.904), with low cross probabilities (0.000–0.077, M = 0.024). In this model, entropy was also acceptable (see Table 1), indicating acceptable classification accuracy (Reinecke, 2006). The five-profile solution was retained for further analysis and interpretation.

Profiles from the retained five-profile solution are shown in Fig. 1, and Appendix E shows profile-specific means on the LPA indicators. Profile 1 (31.7%) was characterized by low levels of general decent work, below-average safe conditions and values, slightly-below average access to health care, approximately average time and rest, slightly above-average adequate compensation, and above-average levels of all precarity indicators, with especially high levels of vulnerability. This profile was labeled "Indecent-Precarious Work". The second profile (11.2%) was characterized by high levels of general decent work, access to healthcare, adequate compensation, and time and rest, somewhat lower but still above average safety conditions and values, and below-average levels on all precarity indicators, particularly vulnerability. This profile was labeled "Highly-Decent Work." Profile 3 (17.4%) was characterized by the lowest levels of access to healthcare, well-above average levels of precarious rights, slightly lower but above average levels of safe conditions, time and rest, values, and precarious wages, below-average general decent work and adequate compensation and, to a greater extent, vulnerability. This profile was labeled "Low Health Care-Low Rights". Profile 4 (9.6%) was

□ DECENTWORK ■ SAFECDN Ø ACCESS • ADCOMP ■ TIMEREST ■ VALUE ■ VULNERABLE ■ RIGHTS ■ EXERCISE ■ WAGES

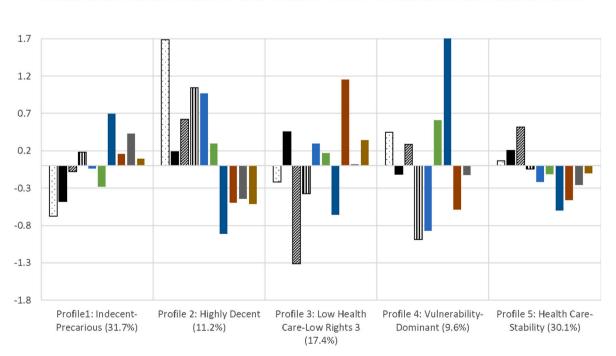


Fig. 1. Profiles of decent and precarious work. Note. Results were z-score standardized to foster interpretation of the histogram. Note. SAFECDN = safe working conditions; ACCESS = access to healthcare; ADCOMP = adequate compensation; TIMEREST = free time and rest; VALUE = complementary values; VULNERABLE = vulnerability; RIGHTS = inadequate rights; EXERCISE = inability to exercise rights; WAGES = inadequate wages.

 Table 2

 Results from the Categorical Latent Variable Multinomial Logistic Regression Models of the Associations of the Predictors with Latent Profile Membership

	1 Vs 5		2 Vs 5		3 Vs 5		4 Vs 5		1 Vs 4	
Predictors	Coef.	OR	Coef.	OR	Coef.	OR	Coef.	OR	Coef.	OR
Volition	-1.268***	0.281	2.034***	7.645	-0.294	0.745	1.205***	3.336	-2.473***	0.084
Gender	-0.088	0.915	-0.533	0.587	0.122	1.130	-0.673	0.510	0.585	1.795
Age	-0.372*	0.690	-0.242	0.785	0.258	1.294	-0.280	0.756	-0.092	0.912
Ed Lvl	-0.174	0.840	-0.213	0.808	-0.087	0.916	1.451***	4.268	-1.625***	0.197
Income	-0.089	0.915	0.155	1.168	-0.490**	0.613	-0.152	0.859	0.063	1.065
	2 Vs 4		3 Vs 4		1 Vs 3		2 Vs 3		1 Vs 2	
	Coef.	OR	Coef.	OR	Coef.	OR	Coef.	OR	Coef.	OR
Volition	0.829+	2.291	-1.499**	0.223	-0.974**	0.378	2.328***	10.260	-3.302***	0.037
Gender	0.141	1.151	0.795	2.216	-0.210	0.810	-0.655	0.519	0.444	1.560
Age	0.037	1.038	0.538*	1.712	-0.630**	0.533	-0.500*	0.606	-0.130	0.879
Ed Lvl	-1.664***	0.189	-1.539***	0.215	-0.087	0.917	-0.126	0.882	0.039	1.040
Income	0.307*	1.360	-0.338+	0.713	0.401*	1.493	0.645***	1.906	-0.245 +	0.783

Note. Coeff = logit coefficient; OR = odds ratio. Ed Lvl = Education Level; Gender was coded as a dichotomous variable (0 = male, 1 = female). Profile 1 = Indecent-Precarious; Profile 2 = Highly Decent; Profile 3 = Low Health Care-Low Rights; Profile 4 = Vulnerability-Dominant; Profile 5 = Health Care-Stability. *** p < .001, ** p < .01, ** p < .05, ** p <

characterized by very high levels of vulnerability, above-average general decent work, values congruence, and, to a lesser extent, access to healthcare as well as well-below average levels of adequate compensation and time and rest, below-average precarious rights, slightly below average safety conditions and precarious exercise rights, and approximately average wages. This profile was labeled "Vulnerability-Dominant". The final profile (30.1%) was characterized by moderately above-average access to healthcare, lower but still above-average safe conditions and, to a lesser extent, general decent work, marginally below-average adequate compensation, values, and wages, and lower levels of time and rest, exercise rights, rights, and vulnerability. We labeled this profile "Health Care-Stability".

3.3. Predictors of profile membership

Table 2 shows the results from the categorical latent variable multinomial logistic regressions for the relations of the theorized predictors with profile membership. Individuals with greater work volition were statistically significantly less likely to be in Profile 1 (Indecent-Precarious Work) than in all other profiles. On the contrary, greater volition significantly predicted a higher likelihood of membership in Profile 2 (Highly-Decent Work) than in all other profiles, excepting Profile 4 (Vulnerability-Dominant) for which the effect was marginally significant. Greater volition was also associated with a significantly higher likelihood of membership in Profile 4 (Vulnerability-Dominant) than in Profile 5 (Health Care-Stability) and Profile 3 (Low Health Care-Low Rights).

With respect to demographic characteristics, gender was not significantly associated with the likelihood of profile membership. For age, a small number of effects emerged. Higher age was associated with a greater likelihood of membership in Profile 3 (Low Health Care-Low Rights) relative to Profile 4 (Vulnerability-Dominant), Profile 1 (Indecent-Precarious Work) and Profile 2 (Highly-Decent Work). Additionally, higher age was associated with a higher likelihood of membership in Profile 5 (Health Care-Stability) than in Profile 1 (Indecent Precarious Work). For educational level, only significant effects involving Profile 4 were found. Higher educational level was associated with a greater likelihood of membership in Profile 4 (Vulnerability-Dominant) relative to all other profiles. Finally, some effects of income were obtained. Participants who reported greater income had a significantly greater likelihood of membership in Profile 1 (Indecent-Precarious Work), Profile 2 (Highly-Decent Work), and Profile 5 (Health Care-Stability) relative to Profile 3 (Low Health Care-Low Rights), and a marginally significantly greater likelihood of membership in Profile 4 (Vulnerability-Dominant) relative to Profile 3 (Low Health Care-Low Rights). Additionally, higher income was significantly associated with a greater likelihood of membership in Profile 2 (Highly-Decent Work) relative to Profile 4 (Vulnerability-Dominant) and Profile 1 (Indecent-Precarious Work), though the latter effect only approached significance.

3.4. Outcomes of profile membership

Table 3 shows mean differences in the outcomes across the profiles. Competence needs satisfaction was highest in Profile 2 (Highly-Decent Work) and significantly higher than in all other profiles. In contrast, Profile 1 (Indecent-Precarious Work) had the lowest levels of competence needs satisfaction, which was significantly lower than in all profiles. Profiles 3 (Low Health Care-Low Rights), 4 (Vulnerability-Dominant), and 5 (Health Care-Stability) did not significantly differ on competence. A comparable pattern of results was observed for relatedness needs satisfaction. Relatedness was significantly higher in Profile 2 (Highly-Decent Work) and lower in Profile 1 (Indecent-Precarious Work) than in all profiles. Relatedness was significantly higher in Profile 4 (Vulnerability-Dominant) than in Profile 3 (Low Health Care-Low Rights) but did not significantly differ from levels in Profile 5 (Health Care-Stability). Profiles 3 (Low Health Care-Low Rights) and 5 (Health Care-Stability) did not significantly differ on relatedness. For autonomy needs satisfaction, the highest levels were observed in Profile 2 (Highly-Decent Work) followed by Profile 4 (Vulnerability-Dominant), and though these two profiles did not differ from each other on autonomy, they significantly exceeded levels of autonomy

Table 3
Mean Levels on the Outcomes Across Profiles

Outcomes	Profile 1: Indecent- Precarious (a)	Profile 2: Highly Decent (b)	Profile 3: Low Health Care-Low Rights (c)	Profile 4: Vulnerability- Dominant (d)	Profile 5: Health Care-Stability (e)	Overall Test
Competence	-0.605 _{bcde}	1.362_{acde}	0.203 _{ab}	0.300 _{ab}	0.328 _{ab}	255.051***
Relatedness	-0.664_{bcde}	1.416_{acde}	0.025_{abd}	0.506_{abc}	0.326_{ab}	322.197***
Autonomy	-0.572_{bcde}	0.868_{ace}	0.257_{abd}	0.672_{ace}	0.120_{abd}	163.320***
Survival	-0.640_{bcde}	0.946_{acde}	-0.350_{abde}	0.124_{abce}	0.404_{abcd}	322.316***
Soc. Cont.	-0.474 _{bde}	0.723_{ace}	$-0.278_{\rm bde}$	0.826_{ace}	0.099_{abcd}	238.907***
Job Satisfaction	-0.616 _{bcde}	1.277_{acde}	-0.116_{abd}	0.332_{abce}	0.115_{abd}	386.563***
Life Satisfaction	-0.446 _{bde}	0.737 _{ace}	-0.255 _{bde}	0.417 _{ac}	$0.188_{ m abc}$	83.862***

Note. Subscripts denote profiles that differ significantly on the outcomes at p < .05. The overall tests are distributed as chi-square variates with 4 degrees of freedom. Soc. Cont = Social Contribution. *** p < .001

in the remaining profiles. Autonomy was lowest in Profile 1 (Indecent-Precarious Work), and significantly lower than in all other profiles. Autonomy did not significantly differ between Profile 3 (Low Health Care-Low Rights) and Profile 5 (Health Care-Stability).

Significant differences in mean levels of survival needs and social contribution needs satisfaction across the profiles were also found. Levels of survival needs satisfaction were significantly higher in Profile 2 (Highly-Decent Work) than in all other profiles. In contrast, survival needs were lowest in Profile 1 (Indecent-Precarious Work) and significantly lower than in all other profiles. Survival needs satisfaction in Profile 5 (Health Care-Stability) significantly exceeded levels in Profile 3 (Low Health Care-Low Rights) and 4 (Vulnerability-Dominant), and levels in Profile 4 (Vulnerability-Dominant) were significantly higher than in Profile 3 (Low Health Care-Low Rights). For social contribution needs satisfaction, Profile 4 (Vulnerability-Dominant) had the highest levels, which significantly exceeded levels in all profiles other than Profile 2 (Highly-Decent Work). In contrast, social contribution was lowest in Profile 1 (Indecent-Precarious Work) and significantly lower than in all other profiles, excepting Profile 3 (Low Health Care-Low Rights). Levels of social contribution needs in Profile 5 (Health Care-Stability) significantly exceeded levels in Profile 3 (Low Health Care-Low Rights).

Finally, job satisfaction and life satisfaction differed significantly across the profiles. Job satisfaction was significantly higher in Profile 2 (Highly-Decent Work) and significantly lower in Profile 1 (Indecent-Precarious Work) than in all other profiles. Levels of job satisfaction in Profile 4 (Vulnerability-Dominant) were significantly higher than in Profile 3 (Low Health Care-Low Rights) and Profile 5 (Health Care-Stability), and these two latter profiles did not significantly differ from each other. For life satisfaction, the highest levels were observed in Profile 2 (Highly-Decent Work), significantly exceeding levels for all other profiles except Profile 4 (Vulnerability-Dominant). On the contrary, Profile 1 (Indecent-Precarious Work) had the lowest life satisfaction, with levels significantly lower than for all other profiles except Profile 3 (Low Health Care-Low Rights). Life Satisfaction in Profile 4 (Vulnerability-Dominant) and Profile 5 (Health-Care-Vulnerability Dominant) did not significantly differ; however, levels in these profiles exceeded levels in Profile 3 (Low Health Care-Low Rights).

4. Discussion

In this study, we have sought to explore the nature of work conditions in the U.S. by examining individuals' self-reports of their working contexts along with related psychosocial factors. Consistent with RQ1, we were able to identify five profiles of decent work and precarious work (Indecent-Precarious; Highly Decent; Low Health Care-Low Rights; Vulnerability-Dominant; Health Care-Stability), which represent individuals' self-reported experiences about their working conditions operating in combination. Moreover, meaningful relations of the profiles with (a) work volition and the sociodemographic predictors and (b) the theorized needs satisfaction and well-being outcomes support the validity of the profiles.

The first profile labeled Indecent-Precarious Work captured a relatively consistent cluster of attributes including highly precarious work along with indecent work conditions. The only unexpected attribute of this profile was a modestly elevated level of adequate compensation, which may reflect greater levels of income despite challenging working conditions. The second profile labeled Highly Decent Work coheres around all of the decent work conditions and low levels of the precarious work indicators. The third profile labeled Low Health Care-Low Rights reflected a notable lack of access to healthcare, lower levels of rights at work, modestly high levels of safe work conditions and low levels of vulnerability. The meaning of this profile clusters around lower levels of benefits, including access to health care and the capacity for rights at work, such as paid vacations, pensions, severance pay, and unemployment benefits, in conjunction with safe conditions and more stability (via the relative low level of vulnerability). This profile may reflect the sort of work that provides reasonable conditions in some areas (e.g., workplace health and safety), but a notable lack of healthcare, perhaps reflecting a particularly American version of precarious work due to inconsistencies in access to benefits. The fourth profile labeled Vulnerability-Dominant also reflects a specific sub-section of the population that is experiencing precarious work with a particularly heightened sense of vulnerability coupled with modestly high overall decent work and access to healthcare. This profile also included below average levels of adequate compensation and time and rest, with modest capacity to express rights. The vulnerability elevation coupled with the other indices suggest that this work condition may consist of workers who experience precarity in many dimensions, but may also find aspects of their jobs somewhat manageable. The fifth profile labeled Health Care-Stability captures work with a prominent role of access to health care coupled along with stability (as reflected in an absence of the features of precariousness). This profile underscores the importance of health care in the U.S. workforce in its relationship to stability and agency at work.

4.1. Predictors of profile membership

Findings regarding predictors of profile membership are revealing, allowing further exploration of the meaning of specific profile membership within the broad array of working conditions in the contemporary American labor market. Consistent with RQ2, work volition was a notable factor in differentiating the profiles in theoretically meaningful ways. In general, higher levels of work volition were associated with a higher likelihood of membership in profiles indicative of greater decent work and less precarious work. This was particularly evident by the theoretically predictable relationships of work volition with Highly Decent and Indecent-Precarious profiles in comparison to all of the other profiles. The strength of work volition in this person-centered analysis aligns with previous variable-centered work that has demonstrated the important role of work volition in predicting positive work outcomes, such as decent work (Blustein & Duffy, 2021; Smith et al., 2020).

Some of the demographic factors were also related to profile membership in meaningful ways. Gender was not a statistically significant predictor of profile membership. While this finding is inconsistent with research and theory in precarious work (Kalleberg, 2018), the result reported here is congruent with research on decent work (via the DWS scale). Although gender did not appear prominent in predicting the decent and precarious elements examined in this study, further research is needed considering the breath of literature that implicates gender in relation to so many other conditions of work (e.g., harassment, wage gaps, etc.). Age was positively associated with greater likelihood of membership in the Low Health Care-Low Rights Profile than the Indecent-Precarious and Highly Decent Profiles, respectively. A close examination of this finding reflects age differences in work conditions wherein more experienced or older workers are likely to be in conditions that are not optimal, but these conditions may have some levels of decent conditions, such as safety and adequate time for rest (cf. Kalleberg, 2018).

Socioeconomic status factors were associated with profile membership in meaningful ways. In comparison to all other profiles, higher income predicted a decreased likelihood of membership in Low Health Care-Low Rights, which seems to reflect lower paying jobs that also do not have access to decent benefits. Furthermore, higher levels of education were significantly associated with the Vulnerability-Dominant profile membership in relation to the other profiles. The higher education level may be reflective of consultants and other skilled precarious workers who have specific talents, but also inadequate levels of both compensation and time for rest as well as considerable vulnerability. In addition, higher income was significantly associated with being more likely to be in the Highly Decent Work profile relative to the Vulnerability-Dominant profile. Taken together, most predictors, with the exception of gender, were associated with conditions of decent and precarious work in theoretically meaningful ways.

4.2. Outcomes of profile membership

The findings on the outcome variables in relation to the profiles provide meaningful insights into the experiences of some participants in the U.S. labor market who are struggling to obtain stable work, as well as informative observations about the underlying tenets of PWT. For example, when considered collectively, the PWT needs satisfaction factors performed in accordance with theoretical expectations (cf. Autin et al., 2019). This is supported by the finding that the satisfaction of PWT needs was generally highest in the Highly-Decent Work profile and lowest in the Indecent-Precarious Work profile. A more nuanced look at these findings reveals that autonomy, while prominent in Highly-Decent Work, was also more pronounced in the Vulnerability-Dominant, reflecting some unique attributes of this profile. The prominent role of autonomy in the Vulnerability-Dominant profile suggests that individuals in this profile may include consultants, contractors, and other highly skilled workers who have some degree of control in their work lives, despite precarious conditions. This finding is consistent with prior research as well as theoretical expectations about the relationship between autonomy and decent work outlined in PWT (Blustein & Duffy, 2021).

Moreover, the findings pertaining to the mean differences across the profiles regarding survival needs are consistent with theory and research, underscoring how indecent and precarious work challenges the capacity for work to sustain people. Interestingly, the Vulnerability-Dominant profile also was characterized by high levels of social contribution needs fulfillment. Given the prominent role that general decent work, access to health care, and value congruence play in the Vulnerability-Dominant profile, this finding may reflect workers whose precarity may allow them to select assignments that allow for social contribution. Lastly, the findings with life and job satisfaction were consistent with research and theory from PWT and other bodies of work in vocational psychology (Blustein, Kenny, Di Fabio et al., 2019; Swanson, 2012). Individuals who had access to decent and stable work were more likely to report satisfaction with work and overall well-being, supporting the underlying theoretical premises of PWT.

4.3. Implications for theory, research, practice, and policy

The findings from this profile analysis affirmed many of the tenets of PWT. The positioning of decent work at the center of the PWT model is corroborated by the finding that these conditions have significant relationships with relevant predictors and outcomes. The results from the present study echo the recent profile analysis of decent work by Kim et al. (2020), underscoring the observation that the conditions of work detailed in PWT are not simply additive elements. Beyond supporting prior research, the present study builds on the findings of Kim et al. by examining a precariousness-stability dimension, thus highlighting the importance of stability and security in one's working life in addition to the central tenets of decent work. To fully represent the range of conditions perceived by modern American workers, our findings suggest that decent work and precarious work dimensions should be considered jointly. The profiles observed here provide evidence for theoretically cohesive clustering of individuals along the decent-indecent and precarious-stable continua. As the profiles indicate, it is entirely possible to perceive work as generally decent but to perceive various sources of vulnerability in one's work life, which may have unique implications for well-being outcomes, as is reflected in this study.

The results also point to some interesting trends that merit further investigation and theoretical development. The emergence of the Vulnerability-Dominant profile seems to suggest that a sub-group of individuals who are experiencing some indecent and precarious work conditions also have other notable attributes, including higher levels of education and autonomy as well as the capacity for social contribution. Greater levels of work volition may suggest that these individuals feel a greater sense of control over their work lives. Perhaps individuals in this profile, who had higher levels of life satisfaction than all other profiles except for the Highly-Decent Work profile, are finding ways to adapt to and resist harsh working conditions, which could be facilitated by sources of privilege (such as education).

These findings are also informative in relation to the recent application of PWT to practice using a theory of change paradigm (Blustein, Kenny, Autin, & Duffy, 2019), which provides a clear contextual framework for counseling. The elaboration of the conditions of work detailed in this study underscores that clients in counseling and career development have their own unique experience of working (Blustein, 2006), highlighting the importance of asking clients to describe their experiences in depth as opposed to relying on categorical inferences. For example, even if clients are earning adequate compensation, they may feel vulnerable if working in a context that is highly unstable and precarious, an experience which may undermine their well-being.

The present results also underscore the importance of contextual factors in the career development process. Beyond individual-level change that career interventions can provide, the PWT theory of change highlights the need for systemic changes (Blustein, Kenny, Autin et al., 2019). These findings have important implications for public policy that can guide systemic change, particularly in light of the massive rupture in work conditions during the COVID era. The results provide a valuable glimpse of work life in the U.S. before the pandemic that highlights vulnerabilities and complexities that have been revealed in greater depth during this crisis (Blustein et al., 2020). The identified profiles were associated with predictors and outcomes in ways that support the observation that work has a major impact on people's lives and well-being. When considered collectively, the profiles revealed a complex array of conditions that expose fault lines in the U.S. workplace. Prominent among these is the role of access to health care and other benefits, reflecting the system of healthcare insurance in the U.S. that is connected to employment benefits, which leaves many people uninsured. In addition, the notable role of vulnerability and obstacles to exercising rights and autonomy at work emerged in a number of the profiles. The findings here coupled with the extensive research on decent and precarious work inform many of the policy recommendations that have been advanced in recent years (Blustein, 2019; Hyman, 2018; Kalleberg, 2018). Policies that will provide universal health care, ensure workers' rights, and enhance the overall decency and stability of work are viable directions for systemic reform efforts on work.

4.4. Limitations and conclusion

This study is limited by its exploratory and cross-sectional nature. Although we used PWT to inform the selection of variables and to enrich the analysis of the results, caution is needed in deriving causal inferences. Furthermore, the use of self-report measures is a notable limitation. However, this is mitigated by the validity of the measures and the theoretical grounding of the constructs. The sample is limited given that the Mechanical Turk platform may not be a representative sample of all U.S. workers. Additionally, although we undertook several measures to strengthen the validity of the sample (e.g., by inserting validity checks), it is important to consider critiques of the usage of online data collection platforms such as that used in the present study. Thus, future research is needed to replicate the findings with other samples.

These limitations notwithstanding, this study provides an insightful view of the nature of diverse working conditions in the U.S. The diverse nature of the profiles that emerged in this study coupled with the meaningful findings about the predictors and outcomes of membership in these profiles underscores that the context matters in people's work lives, often in powerful and painful ways.

Appendices A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jvb.2020.103481.

References

Asparouhov, T., & Muthén, B. (2014). Auxiliary variables in mixture modeling: Three-step approaches using M plus. Structural Equation Modeling: A Multidisciplinary Journal, 21(3), 329–341. https://doi.org/10.1080/10705511.2014.915181.

Autin, K. L., Duffy, R. D., Blustein, D. L., Gensmer, N. P., Douglass, R. P., England, J. W., & Allan, B. A. (2019). The development and initial validation of need satisfaction scales within the psychology of working theory. *Journal of Counseling Psychology*, 66(2), 195–209. https://doi.org/10.1037/cou0000323.

Bakk, Z., & Vermunt, J. K. (2016). Robustness of stepwise latent class modeling with continuous distal outcomes. Structural Equation Modeling: A Multidisciplinary Journal, 23(1), 20–31. https://doi.org/10.1080/10705511.2014.955104.

Bauer, D. J., & Curran, P. J. (2003). Distributional assumptions of growth mixture models: Implications for overextraction of latent trajectory classes. *Psychological Methods*, 8, 338–363. https://doi.org/10.1037/1082-989X.8.3.338.

Benach, J., Vives, A., Amable, M., Vanroelen, C., Tarafa, G., & Muntaner, C. (2014). Precarious employment: Understanding an emerging social determinant of health. Annual Review of Public Health, 35(1), 229–253. https://doi.org/10.1146/annurevpublhealth-032013-182500.

Blustein, D. L. (2006). The psychology of working: A new perspective for career development, counseling, and public policy. NY: Routledge.

Blustein, D. L. (2019). The importance of work in an age of uncertainty: The eroding work experience in America. New York, NY: Oxford University Press.

Blustein, D. L., & Duffy, R. (2021). Psychology of working theory. In S. D. Brown, & R. W. Lent (Eds.). Career development and counseling: Putting theory and research to work(3rd ed.). Hoboken, NJ: Wiley.

Blustein, D. L., Duffy, R., Ferreira, J. A., Cohen-Scali, V., Cinamon, R. G., & Allan, B. A. (2020). Unemployment in the time of COVID-19: A research agenda. *Journal of Vocational Behavior*, 119. https://doi.org/10.1016/j.jvb.2020.103436.

Blustein, D. L., Kenny, M. E., Autin, K., & Duffy, R. (2019). The psychology of working in practice: A theory of change for a new era. *The Career Development Quarterly*, 67(3), 236–254. https://doi.org/10.1002/cdq.12193.

- Blustein, D. L., Kenny, M. E., Di Fabio, A., & Guichard, J. (2019). Expanding the impact of the psychology of working: Engaging psychology in the struggle for decent work and human rights. *Journal of Career Assessment, 27*(1), 3–28. https://doi.org/10.1177/1069072718774002.
- Blustein, D. L., Olle, C., Connors-Kellgren, A., & Diamonti, A. J. (2016). Decent work: A psychological perspective. Frontiers in Psychology, 7(407), https://doi.org/10.3389/fpsyg.2016.00407.
- Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. Journal of Applied Psychology, 35(5), 307. https://doi.org/10.1037/h0055617.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3–5. https://doi.org/10.1177/1745691610393980.
- Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. Computers in Human Behavior, 29(6), 2156–2160. https://doi.org/10.1016/j.chb.2013.05.009.
- Diemer, M. A., Mistry, R. S., Wadsworth, M. E., López, 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. https://doi.org/10.1111/asap.12001.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13.
- Douglass, R. P., Velez, B. L., Conlin, S. E., Duffy, R. D., & England, J. W. (2017). Examining the psychology of working theory: Decent work among sexual minorities. Journal of Counseling Psychology, 64, 550–559. https://doi.org/10.1037/cou0000212.
- Duffy, R. D., Allan, B. A., England, J. W., Blustein, D. L., Autin, K. L., Douglass, R. P., Ferreira, J., & Santos, E. J. (2017). The development and initial validation of the decent work scale. *Journal of Counseling Psychology*, 64(2), 206. https://doi.org/10.1037/cou0000191.
- Duffy, R. D., Blustein, D. L., Diemer, M. A., & Autin, K. L. (2016). The psychology of working theory. *Journal of Counseling Psychology*, 63, 127–148. https://doi.org/10.1037/cou0000140.
- Duffy, R. D., Diemer, M. A., Perry, J. C., Laurenzi, C., & Torrey, C. L. (2012). The construction and initial validation of the work volition scale. *Journal of Vocational Behavior*, 80, 400–411. https://doi.org/10.1016/j.jvb.2011.04.002.
- Duffy, R. D., Douglass, R. P., & Autin, K. L. (2015). Career adaptability and academic satisfaction: Examining work volition and self-efficacy as mediators. *Journal of Vocational Behavior*, 90, 46–54. https://doi.org/10.1016/j.jvb.2015.07.007.
- Ghai, D. (2003). Decent work: Concept and indicators. International Labour Review, 142(2), 113-145. https://doi.org/10.1111/j.1564-913X.2003.tb00256.x.
- Hauser, D. J., & Schwarz, N. (2016). Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. Behavior Research Methods, 48(1), 400–407. https://doi.org/10.3758/s13428-015-0578-z.
- Henson, J. M., Reise, S. P., & Kim, K. H. (2007). Detecting mixtures from structural model differences using latent variable mixture modeling: A comparison of relative model fit statistics. Structural Equation Modeling: A Multidisciplinary Journal, 14(2), 202–226. https://doi.org/10.1080/10705510709336744.
- Heppner, M. J. (2013). Women, men, and work: The long road to gender equity. In S. D. Brown, & R. W. Lent (Eds.). Career development and counseling: Putting theory and research to work, (2nd ed., pp. 187–214). Wiley.
- Hyman, L. (2018). Temp: How American work, American business, and the American dream became temporary. Penguin.
- International Labor Organization (2008). Work of work report 2008: Income inequalities in the age of financial globalization. Retrieved from http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_100354.pdf.
- International Labor Organization (2012). Decent work indicators: Concepts and definitions. Retrieved from http://www.ilo.org/wcmsp5/groups/public/—dgreports/-integration/documents/publication/wcms_229374.pdf.
- International Labor Organization (2020). COVID-19 and the world of work: Ensuringno one is left behind in the response and recovery. https://www.ilo.org/global/topics/coronavirus/WCMS_747327/lang-en/index.htm.
- International Labor Organization (2019). World employment social outlook: Trends 2019. Geneva: International Labor Office.
- Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83(1), 17.
- Kalleberg, A. L. (2018). Precarious lives: Job insecurity and well-being in rich democracies. NY: Wiley.
- Kalleberg, A. L., & Vallas, S. P. (Eds.). (2017). Precarious work. Emerald Publishing Limited.
- Kim, H., Duffy, R. D., & Allan, B. A. (2020). Profiles of decent work: General trends and group differences. *Journal of Counseling Psychology*. https://doi.org/10.1037/cou0000434.
- Morin, A. J., Meyer, J. P., Creusier, J., & Biétry, F. (2016). Multiple-group analysis of similarity in latent profile solutions. Organizational Research Methods, 19(2), 231–254. https://doi.org/10.1177/1094428115621148.
- Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. Structural Equation Modeling: A Multidisciplinary Journal, 14(4), 535–569. https://doi.org/10.1080/10705510701575396.
- Paul, K. I., & Moser, K. (2009). Unemployment impairs mental health: Meta-analyses. Journal of Vocational Behavior, 74(3), 264–282.
- Pavot, W., & Diener, E. (2009). Review of the satisfaction with life scale. In E. Diener (Vol. Ed.), Social indicators research series: Vol. 39. Assessing well-being (pp. 101–117). Dordrecht, the Netherlands: Springer. https://doi.org/10.1007/978-90-481-2354-4_5.
- Perera, H. N., Barber, D., & McIlveen, P. (2019). Person-centered research in vocational psychology: An overview and illustration. In J. A. Athanasou, & H. N. Perera (Eds.). International handbook of career guidanceCham: Springer. https://doi.org/10.1007/978-3-030-25153-6_36.
- Reinecke, J. (2006). Longitudinal analysis of adolescents' deviant and delinquent behavior: Applications of latent class growth curves and growth mixture models Methodology, 2(3), 100–112. https://doi.org/10.1027/1614-1881.2.3.100.
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic-dialectical perspective. In E. L. Deci, & R. M. Ryan (Eds.). Handbook of self-determination research (p. 3–33). University of Rochester Press.
- Shah, A. K., Mullainathan, S., & Shafir, E. (2012). Some consequences of having too little. *Science*, 338(6107), 682–685. https://doi.org/10.1126/science.1222426. Smith, R. W., Baranik, L. E., & Duffy, R. D. (2020). Psychological ownership within psychology of working theory: A three-wave study of gender and sexual minority employees. *Journal of Vocational Behavior*, 118, 103374. https://doi.org/10.1016/j.jvb.2019.103374.
- Standing, G. (2014). A precariat charter: From denizens to citizens. New York, NY: Bloomsbury.
- Swanson, J. L. (2012). Work and psychological health. In N. A. Fouad, J. A. Carter, & L. M. Subich (Vol. Eds.), Practice, interventions, and applications: Vol. 2. APA handbooks in psychology. APA handbook of counseling psychology (pp. 3–27). American Psychological Association. https://doi.org/10.1037/13755-001.
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. (2008). Explaining the relationships between job characteristics, burnout, and engagement: The role of basic psychological need satisfaction. *Work & stress*, 22(3), 277–294. https://doi.org/10.1080/02678370802393672.
- Vives, A., Amable, M., Ferrer, M., Moncada, S., Llorens, C., Muntaner, C., Benavides, F. G., & Benach, J. (2010). The Employment Precariousness Scale (EPRES): Psychometric properties of a new tool for epidemiological studies among waged and salaried workers. *Occupational and Environmental Medicine*, 67(8), 548–555. https://doi.org/10.1136/oem.2009.048967.
- Vives, A., Amable, M., Ferrer, M., Moncada, S., Llorens, C., Muntaner, C., Benavides, F. G., & Benach, J. (2013). Employment precariousness and poor mental health: Evidence from Spain on a new social determinant of health. *Journal of Environmental and Public Health*, 2013. https://doi.org/10.1155/2013/978656.
- Wang, M.-T., & Peck, S. C. (2013). Adolescent educational success and mental health vary across school engagement profiles. *Developmental Psychology*, 49(7), 1266–1276. https://doi.org/10.1037/a0030028.
- Williams, G. A., & Kibowski, F. (2016). Latent class analysis and latent profile analysis. In L. A. Jason, & D. S. Glenwick (Eds.). Handbook of methodological approaches to community-based research: Qualitative, quantitative, and mixed methods (pp. 143–151). Oxford University Press. https://doi.org/10.1093/med:psych/9780190243654.001.0001.