

Development of the Contingent Employment Participation Survey (CEPS)

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INTRODUCTION

Non-traditional work arrangements -- often referred to as *contingent employment*, such as contract work, app-based work (e.g., Uber), or freelancing -- are increasing in the United States. The Bureau of Labor Statistics defines *contingent employees* as workers “without an explicit or implicit contract for long-term employment” [1-2]. Contingent employment is characterized by both a lack of attachment between employer and employee, and as a conditional factor of employment, that is, a fixed, limited period of time to perform a specific job. A 2017 study commissioned by the Freelancers Union of America predicts that the number of freelancers will outnumber traditional employees by 2027 [3]. The term is becoming increasingly recognized and some lawmakers are struggling to delineate the responsibilities of employers who routinely use contingent workers. As an example, The Protecting the Right to Organize Act of 2021, if passed, would redefine “independent contractors” as “employees,” which, in turn, would increase employers’ responsibilities and obligations [4].

People with disabilities continue to be unemployed and underemployed at higher rates than the general U.S. population according to the most recent (pre-Covid) data (e.g., 12.5 percent unemployment rate versus 5.9 percent) [1]. However, little is known about the effect of these newer work arrangements on individuals with disabilities. Schur (2003) has observed the complex nature of these non-standard work arrangements, which frequently offer lower pay and less job security, but provide flexibility for health and lifestyle needs [5]. Other studies by Hotchkiss [6] and Jones ([7] tentatively have reinforced these observations. However, studies in disability and employment, have increased in the last few years, including contingent work [8-10]. For example, most recently, Schur and Kruse (2021) have described contingent employment arrangements as “precarious employment” pointing out that they are often the result of job discrimination resulting in the inability to gain traditional employment [11]. Such jobs generally pay less, have less job security and fewer legal protections.

However, despite this increased focus on workers with disabilities, the actual participation and experiences of individuals with disabilities within contingent employment remains understudied. The goals of this study were twofold. First, to identify key variables and themes associated with contingent work practices and experiences among workers with disabilities through semi-structured interviews. These data were used to develop and operationalize items derived from key concepts and themes identified through qualitative data analysis for a new survey: *The Contingent Employment Participation Survey* (CEPS). The CEPS is a new self-report instrument designed to capture key descriptive data about contingent workers’ employment practices among people with disabilities. The second goal of this study is to distribute the CEPS to 1,000 workers with disabilities in the U.S. to establish a preliminary, generalizable evidence base. This paper describes the development of the CEPS and reports the results of content validity testing.

DEVELOPMENT OF THE CEPS

Methods

Qualitative methods were used to develop, administer, and analyze semi-structured phone interviews of 22 workers with disabilities between June 2018 and February 2019. Nonrandom sampling was used to capture differences across impairments, employment type, and demographic variables such as gender and age. Participants were recruited from various disability organizations including independent living centers and vocational rehabilitation organizations. Georgia Institute of Technology’s Institutional Review Board approved the study, and all participants were consented.

Interviews lasted between 60-90 minutes and, with permission, were taped and transcribed verbatim. Participants were asked about the nature of their daily needs and their impact on work; the types of assistive devices used for work; work accommodations; work history; strategies for finding and choosing opportunities for employment; payment and benefits, and, lastly, social relationships, including family, friends, employers, and coworkers. In addition, we probed for a sense of autonomy and inclusion at work, physical comfort, and job satisfaction. We also asked about any negative experiences they experienced such as stigma, employer prejudice, discrimination, or job task difficulties.

All interview data were entered into the qualitative analysis software program NVivo. Data analysis was ongoing throughout data collection to refine initial coding and emergent constructs. Our analysis used an iterative, constant comparative method consistent with a grounded theory approach [12] to search for broad themes and patterns within the data. During data collection and analysis four team members met twice weekly to discuss, organize, and define codes and derived constructs. Where interpretations differed, disagreements were reconciled through discussion. The different professional backgrounds of the core research team helped ensure that coding was minimally biased and represented the broadest perspectives [13].

Results

Over 60% of participants were women and the median age for all individuals was 43.8 years. Nearly all participants held college degrees, and more than half had moderate to high household incomes as described in Table 1. All participants were employed as contract workers, freelancers, and/or doing internships at the time of the interview. Some had worked in full-time positions prior to their contingent employment, while a few were actively seeking full-time positions.

Table 2 identifies the types of “documented” disabilities of our participants. By “documented” we mean participants have told us they possess a clinical diagnosis or other documentation of a health condition that is required to apply for Social Security Disability Insurance (SSDI), supportive therapies, etc. The reason we asked this question was not to *verify* a participants’ disability, nor did we assume that participants defined their “disability” in clinical terms. However, without this documentation participants would have been unable to apply for SSDI, and many other services we queried in our interviews. Clinical documentation reflects how people are initiated into a medical model of disability. It also means that declaring one’s disability (as a diagnosis) to an employer for the purpose of requesting a work accommodation makes the worker vulnerable to prejudice, stigma, and exclusion.

Data analysis revealed varied and unique work arrangements among all participants. The importance of work accommodations and technology use at work (including both assistive and mainstream technologies) reflected different levels of knowledge and comfort with technologies among subjects, especially between those who were born with a disability and those who acquired one later in life. Physical, social, health, and financial barriers to employment were also a significant topic. Our discussions with subjects about their work preferences, work arrangements, and history of employment helped the research team to probe and identify themes that reflected those experiences. In all, analysis led to the identification six major domains: 1) the Nature of Disability, 2) Work Practices, 3) Technology Use, 4) Work Participation, 5) Barriers to Work, and 6) Social Inclusion. These domains were used as the framework for our survey. Forty-eight items were then developed to gather key data regarding the unique nature of contingent work arrangements among individuals with disabilities.

Table 1. Participant Demographics

	Participant demographics (n=22)	
Gender	Male – 8	Female – 14
Race/Ethnicity	Asian – 2 White/Latino – 2	Black/African American – 4 White/Not Hispanic - 14
Education	Bachelor’s degree – 9 Master’s or Doctorate – 8	Associate degree - 3 Some College - 2
Total household income (including benefits) (* Note: 3 participants declined to answer)	\$100,000 or higher – 2 \$50,000-\$74,999 – 5 \$25,000-\$34,999 – 2 Less than \$15,000 - 1	\$75,000-\$99,000 – 3 \$35,000-\$49,999 – 3 \$15,000-\$24,999 – 3
Age	Range: 25-75 years old Mean: 44.6 years old (SD +/- 13.8 years) Median: 43.8 years old	

Table 2. Participants’ Disabilities

CONTENT VALIDITY

Methods

Content validity *refers to the degree to which an assessment instrument is relevant to, and representative of, the targeted construct it is designed to measure.* [14]. The CEPS’ measurement of multiple constructs across varied disability types required expertise in public policy,

Participants’ Documented Disabilities	Number
<u>Sensory</u>	
Total blindness (no light perception)	2
Low vision/Legally blind	6
Deafness	2
Hearing impairment	5
<u>Mobility</u>	
Spinal cord injury	4
Spinal muscular atrophy (SMA)	3
<u>Psychological</u>	
Schizo affective disorder	1
Post-traumatic stress disorder (PTSD)	2
<u>Genetic and chronic conditions</u>	
Genetic disorder	3
Fibromyalgia	1
Chronic fatigue syndrome	3

assistive and mainstream technologies, self-report development, and employment practices of people with different kinds of disabilities, needs, and work goals. To provide the most effective assessment, we recruited a purposive sample of 8 experts from different fields, including public policy, vocational rehabilitation, employment research.

A content validity assessment form was developed so that each expert could assess individual survey items according to standardized criteria. Experts evaluated each item for "relevance" and "clarity"; both of which were rated on a scale of 1 to 4 (Highly Relevant or Highly Clear to Not Relevant or Not Clear). Space was provided for additional comments and suggestions, many of which were helpful in revising, clarifying, or deleting items. The survey was administered online through Qualtrics.

Results

The content validity quantitative analysis was conducted in several steps. First, items were recoded as ‘relevant’ by dichotomizing items rated 3 or 4 (highly relevant, relevant) to ‘relevant’ (1) or ‘not relevant’ (0). In the second step, the total number of ‘relevant’ items was calculated for each expert by domain and for the total CEPS scale by summing the relevant items within each domain.

In the third step, the Content Validity Index was calculated for each item (I-CVI) by summing across the dichotomized ratings for each item, then dividing by the number of experts (8). The final step involved calculating scale level (S-CVIs) by averaging I-CVIs within each domain and for the CEPS Total Scale. The same process was used for clarity.

As shown in Table 3, the number of relevant items showed some variance with the Median (MDN) number of relevant items for the total scale 45. The number of relevant items per domain was equal to the number of items in the domain for 5 of the six domains meaning half or more of the raters evaluated all items in the domain as relevant. Scale-level S-CVIs ranged from a low of .78 for the Social inclusion domain to .98 for the Technology and Work Participation domains. In general, the content validity analysis suggests the CEPS possesses an appropriate and acceptable level of content validity within each domain and for the total scale.

Table 3. Content Validity Psychometrics for CEPS by Domain

Domain (# Items)	Relevance				Clarity			
	(min-	max)	MDN	S-CVI	(min-	max)	MDN	S-CVI
CEPS Scale Total (47)	(47-	44)	45	0.94	(29-	47)	39.5	0.85
Disability (5)	(3-	5)	5	0.93	(3-	6)	3.5	0.73
Work Practices (18)	(14-	17)	16	0.95	(9-	17)	15	0.84
Technology Use (6)	(5-	6)	6	0.98	(3-	6)	4.5	0.8
Work Participation (9)	(8-	9)	9	0.98	(6-	9)	8.5	0.91
Barriers (4)	(3-	4)	4	0.94	(2-	4)	4	0.84
Social Inclusion (6)	(3-	6)	6	0.78	(4-	5)	5	0.94

DISCUSSION

This paper describes the development of the CEPS through semi-structured interviews and the emergent themes and domains they produced. To our knowledge this instrument is the first to address the rise of contingent employment practices among people with disabilities and to gather key data on the nature of these practices. The relationship between the onset of disability and attitudes toward assistive and mainstream technologies; the importance of informal social networks in finding work; the discrimination and exclusion confronting many participants, or the effects of disability advocacy on employment goals reflect the varied strategies and influences impacting careers based, at least in part, on contingent employment practices. These practices are often combined with traditional types of work (part-time or full-time) and increasingly reflect lifestyle choices. In contrast, the lack of health benefits and insurance from employers, and limitations on income imposed by SSDI reflect trade-offs between the advantages of contingent employment practices and the security of traditional employee-employer relationships. As a new self-report measure, the CEPS is well positioned to not only collect key data

about contingent employment, but to better understand the myriad ways in which workers with disabilities find and create employment opportunities and income.

CONCLUSION

The CEPS has demonstrated acceptable content validity. It is currently undergoing test/retest reliability and will soon be distributed to 1,000 workers who are contingently employed. It is hoped this new knowledge will provide policy makers, researchers, vocational rehabilitation experts, people with disabilities, and other stakeholders with a more comprehensive understanding of the complexities confronting individuals with disabilities as they search for employment and develop careers. The results of the survey will be useful for those capturing data on employment statistics as the upward trend in contingent employment continues. Better data on how people with disabilities are engaging in contingent employment may help shape policy related to SSDI benefits as well as vocational rehabilitation services.

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