Abstract

Only about one-third of people with disabilities were employed in the US, and their wages were significantly lower than those without disabilities. Using a survey on vocational rehabilitation (VR) counselors linked with their client's case reports similar to Rehabilitation Services Administration (RSA) 911 data. This study explored the impact of characteristics of both counselor and client participants on the living wage employment outcomes (defined as $15 or more per hour). Among 26,803 client participants with disabilities from 184 counselor participants, the overall employment rate was 36%, but the rate of living wage employment was only 6%, which accounted for about 17% of any employment. Although several client participant's characteristics were important in determining employment outcomes, except for the counselor participant's higher caseload, other counselor participant's characteristics such as age, gender, training, and years of experience, were not related to their client participant's chance of obtaining living wage employment. Research on evidence-based interventions should be explored and implemented to improve the rate of living wage jobs among VR clients.

Keywords: vocational rehabilitation, employment outcome, living wage, counselor, caseload

Disparities in the Quality of Employment Placement and Live Wage Employment by Counselor's Training and Caseload among Their Clients with Disabilities

Introduction

In 2022, over 32 million people were living with disabilities in the US (BLS, 2023). Of 16.4 million working-age adults with disabilities (aged 16 to 64), only 34.8% of them were employed, compared to an employment rate of 74.4% among people without disabilities (BLS, 2023). Furthermore, workers with disabilities were twice more likely to work part-time than those with no disability, and about 19% of workers with disabilities were working in service occupations, compared with about 16% of workers with no disability. The unemployment rate and rate of not being in the labor force among people with disabilities were also more than twice as high as those with no disability.

These dire statistics were more distressing when considering wages and earnings. For example, according to the 2017 American Community Survey (ACS), full-time, year-round workers with disabilities earned only 87 cents for every dollar earned by those with no disability (Day & Taylor, 2019). In total, people with disabilities with a high school or equivalent degree earned, on average, $6,505/year less than their peers without a disability, and the earning disparities became larger among those with higher education (Yin et al., 2014). For workers with intellectual and developmental disabilities, the average hourly wage was a little more than $9 for jobs with or without support and about $6.6 for those working in group-supported settings (e.g., sheltered workplaces) (Hiersteiner et al., 2018). However, the federal minimum wage has been $7.25 per hour since 2009, and the minimum hourly wage is now $11.25 for contractors to federal projects according to the US President's Executive Order 13658 (effective on Jan 1, 2022). Many states have also set a minimum wage of more than $10/hour (BLS, 2023). Thus,

the low wages among workers with disabilities not only discourage people with disabilities from seeking employment but also increase the risk of persistent poverty even if they are working full-time (Abidi & Sharma, 2014; Ahonen et al., 2018). Furthermore, the targeted wages for people with disabilities should allow them to achieve economic sufficiency, that is, a fair wage is at least a "living wage" (Figart & Marangos, 2013).

The living wage campaigns have a long history, and the recent movement started in Baltimore, MD, in 1994, when the city government mandated a minimal living wage requirement for all governmental contractors. The living wage is a wage that is sufficient for people to support themselves and their families to live a decent life (Luce, 2022). Thus, it is higher than the minimum wage mandated by the federal or state government. It has also become increasingly more critical considering the widened wealth inequality, exorbitant costs of living, and declining collective bargaining power of organized workers. However, several legislative attempts at the federal level were not successful (including the most recent attempt made by the Biden government) (Luce, 2022). Meanwhile, many municipal governments in the US have mandated ordinances on living wage floors depending on the estimates of basic needs for supporting individuals and their families locally. Although such living wage ordinances targeted governmental contractors, a rippling effect was expected and other local employers may raise their wage payments for their employees accordingly.

Fighting for a living wage for individuals with disabilities also has a long history (Ciscel, 2000; Friedman & Rizzolo, 2020; Lustig & Strauser, 2004), and similar to those without disabilities, fighting for $15/hour is the goal of the current living wage campaigns. However, as shown in the US labor statistics and results from national surveys, little progress has been achieved so far (BLS, 2023; Hiersteiner et al., 2018).

Quality employment outcomes require more than just being employed (Wehman et al., 2018). The living wage employment should be the benchmark for assessing the employment outcomes of vocational rehabilitation (VR) services (Lustig & Strauser, 2004), which is implied from the law (e.g., 1998 Amendments of Rehabilitation Act) (Moon & Shin, 2006; Russell, 2002). In the US, federal-state-supported VR agencies provide intensive VR services to individuals who voluntarily seek services from VR counselors. The mission and goal of any VR programs are to achieve gainful employment and improve the quality of life for individuals with disabilities (RSA, 2023). It also emphasizes the role of competitive integrated employment (CIE) in which individuals with disabilities work together with those without disabilities, receive comparable pay and have equal opportunities for career advancement (Wehman et al., 2018). Thus, workers with disabilities can and should receive a living wage that leads to improved socioeconomic status (Walls & Dowler, 2015).

Literature Review

Past research has identified numerous factors and barriers that affect the employment outcomes of individuals with disabilities. Personal characteristics such as young age, female, African American, lower education, severe disabilities, and more physical and function limitations were associated with lower employment rates, and some of them are modifiable (Dutta et al., 2008; Sevak et al., 2015; Sevak et al., 2019). Contextual factors such as community resources, employer attitudes, and family support were critical in determining the chance of employment (Almalky, 2020; Cheng et al., 2018; Sevak et al., 2019; Vornholt et al., 2018). Furthermore, rehabilitation counseling has been well recognized as the key enabler in helping individuals with disabilities achieve employment (Dutta et al., 2008; Lustig & Strauser, 2004).

Compared with those who did not receive VR services, those who completed VR programs had higher employment rates at exit (Nevala et al., 2019; Riesen et al., 2023).

However, few studies examined the impact of VR counselor's characteristics on the employment outcomes among VR clients with disabilities. In our previous studies, we found that counselors who had a master's degree in rehabilitation counseling were more effective in helping their clients achieve employment outcomes (Mackay et al., 2020; Mackay et al., 2018; Yu et al., 2023). We also found that those counselors with a moderate caseload had the highest employment closure rate of their clients compared to those with either lower or higher caseloads. We also identified several important domains of knowledge and skills among counselors based on their client's employment outcomes (Yu et al., 2023). Although our previous studies also explored the determinants of high-quality employment (working $\geqslant$30 hours/week or having $\geqslant$ \$11.25/hour jobs) (Mackay et al., 2020; Yu et al., 2023), we did not explicitly examine the role of counselors in helping their clients achieve living wage employment, and no previous study has explored the impact of counselor's characteristics on the living wage outcomes.

Research Questions

Therefore, this study is to examine the impact of characteristics of both client and counselor participants on the chance of obtaining living wage jobs ($\geqslant$ \$15/hour). Specifically, we will address the following research questions (RQ):

RQ1: What is the rate of working for a living wage or above among VR clients with disabilities?

RQ2: What are the significant individual factors of VR clients that influence their chance of working for a living wage?

RQ3: Can a VR counselor's training and work experience increase their client's chance of working for a living wage?

Materials and Methods

The Institution Review Board (IRB) of the primary authors' institution approved the current study before its initiation, with support from state VR agencies of the participating states: Connecticut (CT), Florida (FL), Idaho (ID), and Utah (UT).

Counselor Participants

We invited all VR counselors employed by the participating state vocational rehabilitation (VR) agencies as of 2017 to voluntarily participate in this study with no incentives. Emails were sent with the link to the online survey that the authors manage. Only those counselors who had completed all survey questions and had at least one VR case during the study period were included in the final analysis (N=184) (Table 1).

Client Participants

All clients who had disabilities and received services from the above VR counselors were included in the study cohort. However, we limited this study to client participants aged 16 to 60 and excluded those who were employed before the counseling or died before the exit. Those who reported no impairment or became ineligible at the time of the exit were also excluded. Furthermore, we excluded those with disabilities that were too severe to receive employment or continue the counseling at the exit, as they would not be employed practically. The final analysis included 26,803 client participants (Table 2).

Measurements and procedures

The online survey instruments were developed and implemented using the Qualtrics® online survey system and tested previously (Mackay et al., 2018). The survey questionnaire consisted of 23 items, including the counselor participant's demographics, year of graduation, highest education and discipline, years of experience as a rehabilitation counselor, perceived preparedness for work as a rehabilitation counselor, and knowledge and concerns about rehabilitation counseling. Then the counselor's survey records were linked with their client's original case service records for the years 2014 to 2018 (varied by state). These case records were the same data sources that VR agencies prepared for the de-identified RSA 911 case reports. The linkage was completed by the staff at each participating state VR agency and the counselor's survey and client's case services records were matched by the counselor participant's name that appeared in both data. After matching, the identification information for both counselors and clients was removed. These individual case records included client participants' demographics, primary support, closure status (employed or not) if employed, job title, types of work environment, working hours per week, and hourly wage. The client participant's disability type and significance of severity were also included. The original study investigators cleaned and anonymized the final analytic data for the current study.

Statistical analysis

Characteristics of both client and counselor participants were presented with descriptive statistics using means or medians for continuous variables, and frequencies for categorical variables. The main outcomes were the client participant's closure status (employed or not) and living wage employment status (earning a minimum of US $15 per hour). For those who claimed working at exit but reported zero working hours or zero houly wage, we recoded the employment status as not employed. We further examined the occupation classification according to RSA 911

coding scheme, and recoded “homemaker” as “not employed”. The main predictor was the client participant’s and counselor participant’s characteristics (also see Tables 1 and 2). They included the client participant's characteristics such as age, education, primary source of supports, and the severity significance of disability (significant vs. most significant). The counselor participant's characteristics included age, years of experience (less than 6 years vs. 6 years or more), and having a master’s degree in rehabilitation counseling or other master's degrees. The counselor participant’s caseload was calculated based on the total number of clients with disabilities for each counselor participant in the data and averaged by years into annual caseloads.

In addition to descriptive statistics, multilevel logistic regressions were used to obtain adjusted odds ratios (ORs) with generalized estimated eqution method and with robust variance to account for the clustering of clients within counselors. The adjusted ORs were presented with both client and counselor participant characteristics in the model, thus assessing the independent effects of each variable. The state information is also included to account for geographic and policy variations. All analyses were conducted with Stata 16.1 (Stata LLC. College Station, Texas), and a p-value of less than 0.05 was considered statistically significant.

Results

There were 26,803 VR client participants included in this study, and their basic characteristics are presented in Table 1. About 41% of client participants were from UT, and 35% were from ID. The mean age was 34 years, and 86% of them were Caucasian Americans. About 38% of them had a high school diploma, but 22% did not, while about 15% of them had post-secondary education without a diploma. Psychological (46.5%) and cognitive (21.8%)

disabilities accounted for the majority of disabilities, and 44.5% of them had more severe disabilities.

Table 1

Characteristics of Client Participants Included in the Study

		N	%
Total		26,803	100
State			
	CT	3,030	11
	FL	3,416	13
	ID	9,311	35
	UT	11,046	41
Age (mean, SD)		33.7	12.6
Race			
	American Indian or Alaska Native	461	1.7
	Asian	326	1.2
	Black or African American	1,954	7.3
	Multiracial	487	1.8
	Unknown	502	1.9
	White	13,073	86.1
Education at application			
	Elementary education	931	3.5
	Secondary education, no HS degree	4,999	18.7
	HS degree or equivalent	10,115	37.7
	Post-secondary, no degree	3,940	14.7
	Associate degree or vocation/tech	1,864	7.9
	Special education	1,728	6.5
	Bachelor or above	1,720	6.4
	Other	1,506	5.6
Current student at the application			
	No	24,748	92.3
	Yes	2,055	7.7
Disability types			

	psychosocial	12,474	46.5
	cognitive	5,839	21.8
	physical	1,526	5.7
	mobility	1,756	6.6
	manipulative	1,002	3.7
	hearing	1,005	3.8
	vision	227	0.9
	communicative	114	0.4
	other	2,860	10.7
Disability significance status			
	Significant	14,792	55.2
	Most significant	12,011	44.5
Primary support at close	Personal income	7,947	29.7
	Public supports	5,453	20.3
	Family, friends, or others	8,349	31.2
	Unknown	5,056	18.9
Employed at closure			
	No	17,168	64
	Yes	9,640	36
Weekly hour working if employed (mean, SD)		30.5	11
Hourly wage if working (mean, SD)		11.4	5.5
Working full time (30 hr+)			
	No	21,103	78.7
	Yes	5,700	21.3
Working for a living wage or above ($15/hour+)			
	No	25,201	94
	Yes	1,602	6

Note: CT: Connecticut; FL: Florida; ID: Idaho; UT: Utah. SD: standard deviation.

Table 2 describes the basic characteristics of counselor participants who managed these client participants. The mean age was 43 years old, with an average of 8.3 years of working experience, or 48% of them had more than six years of experience. In addition, the average caseload was 52 clients per year; 85% of them had a master's degree, and 59% of them had a master's degree in rehabilitation counseling.

Table 2

Counselor Participant's Characteristics Included in the Study

		N	%
Total		184	100
State			
	CT	24	13
	FL	41	22
	ID	37	20
	UT	82	44
Sex			
	Female	127	69
	Male	57	31
Age (mean, SD)		43.3 (10.7)	
Years of experience (mean, SD)		8.5	7
More than six years of working experience			
	No	96	52
	Yes	88	48
caseload (median and IQR)		52	36 - 72
caseload groups			
	1 - 35	46	25
	36 - 50	43	23
	51-75	54	29
	75-180	41	22
Having a Master's degree			
	No	27	15
	Yes	157	85
Master's degree in Rehabilitation Counseling			
	No	76	41
	Yes	108	59

Note: CT: Connecticut; FL: Florida; ID: Idaho; UT: Utah. SD: standard deviation; IQR: interquartile range.

RQ1: What is the rate of working for a living wage or above among VR clients with disabilities?

Overall, about 36% of VR client participants obtained employment at the closure (Table 1), and 21% worked full-time (≥30 hours/week). However, the average hourly wage was $11.4/hour if working, and 6% of them obtained a living wage or above employment (≥$15/hour). More strikingly, the most common jobs were service or clerk-related jobs, which are typically low-paying jobs. The distribution of wages across different types of jobs was presented in the supplementary table. Those with service jobs, helpers, and various aids had median hourly pay below $15.

RQ2: What are the significant individual factors of VR clients that influence their chance of working for a living wage?

Table 3 further explored the rates of employment with a living wage or above by both the client and counselor participant's characteristics. Among those client participants who were employed, only about 16.6% of them obtained living wage employment. Client participants in Idaho had the lowest rates compared with other states. Younger client participants were more likely employed, but less likely to receive living wage employment. In addition, being white, having higher education, having sensory or physical disabilities, and having significant disabilities were all associated with higher rates of both employment and living wage

employment. Those employed with support and those living on public support were less likely to receive a living wage.

Table 4 examined the impact of the above-mentioned characteristics in the multivariable models. Client participant's age was not related to the chance of employment in general, but remained significant for living wage employment such that older client participants were more likely to receive living wage employment. Other patterns persisted, with most factors impacting both the chances of obtaining any employment and a living wage employment.

RQ3: Can a counselor's training and work experience increase the client's chance of working for a living wage?

Although the overall employment rates were higher among counselor participants of male, younger, more experienced, and those with a master's degree or training in rehabilitation counseling, most counselor participant's characteristics were generally not related to the differences in the living wage employment of their client participants, except for counselor participants with the highest caseload (75-180 per year) whose client participants had the lowest rate of living wage employment (Table 3). This was further confirmed in the multivariable analysis that none of the counselor participant's characteristics was related to the client participant's chance of obtaining living wage jobs except for those with higher caseloads (Table 4).

Table 3

Rates of Overall Employment and Living Wage or Above Employment by Characteristics of Client Participants and Counselor Participants

		Employed		Working for a living wage or above ($15/hour+)		
		N	**Rate (%)**	**N**	**Rate (%)**	**% among employed**
Total		9,640	36	1,602	6	16.6
State						
	CT	1,094	36.1	216	7.1	19.7
	FL	834	24.4	130	3.8	15.6
	ID	2,432	26.1	294	3.2	12.1
	UT	5,280	47.8	962	8.7	18.2
Age						
	15 - 22	2,595	36	226	3.1	8.7
	23 - 32	2,548	38.1	387	5.8	15.2
	33 - 45	2,424	36.5	512	7.7	21.1
	46 +	2,073	33.1	477	7.6	23.0
Race						
	American Indian or Alaska Native	143	31.0	22	5	16.0
	Asian	131	40.2	17	5.2	13.0
	Black or African-American	569	29.1	50	2.6	8.8
	Multiracial	128	26.3	13	2.7	10.2
	Unknown	5	1	4	0.8	80.0
	White	8,664	37.6	1,496	6.5	17.3
Education at application						

	Elementary education	328	35.2	45	4.8	13.7
	Secondary education, no HS degree	1,566	31.3	185	3.7	11.8
	HS degree or equivalent	3,871	38.3	517	5.1	13.4
	Post-secondary, no degree	1,575	40	341	8.7	21.6
	Associate degree or vocation/tech	777	41.7	199	10.7	25.6
	Special education	763	44.2	40	2.3	5.2
	Bachelor or above	705	41.0	255	14.8	36.1
	Other	55	3.6	20	1.3	36.4
Current student at the application						
	No	8,659	35	1,453	5.9	16.8
	Yes	981	47.7	149	7.3	15.2
Disability types						
	psychosocial	4,261	34.2	622	5	14.6
	cognitive	2,338	40.0	257	4.4	11.0
	physical debilitation	447	29.3	95	6.2	21.3
	mobility	553	31.5	142	8.1	25.7
	manipulative	328	32.7	78	7.8	23.8
	hearing	509	50.6	191	19	37.4
	vision	86	37.9	20	8.8	22.2
	communicative	56	49.1	2	1.8	3.6
	other	1,062	37.1	196	6.9	18.5
Disability significance status						
	Significant	5,605	37.9	1,178	8	21.0
	Most significant	4,035	33.6	424	3.5	10.5

Employment types (among employed)	Competitive integrated environment	6,481	67.2	1,146		17.7
	Employed with supports	766	7.9	34		4.4
	Employed without supports	1,649	17.1	228		13.7
	Other	744	7.8	194		24.6
Primary support at close	Personal income	6,714	84.5	1,293	16.3	19.3
	Public supports	1,151	21.1	60	1.1	5.3
	Family, friends, or others	460	5.6	16	3.5	-
	Unknown	1,315	26.0	233	4.6	17.7
Most common jobs						
	Other service workers	1220	4.6	25		2.0
	Cleaner	698	2.6	17		2.4
	Service Representative	696	2.6	46		6.6
	Clerk	621	2.3	86		13.8
	Sales	612	2.3	34		5.6
	Foodservice	458	1.7	14		3.1
	Stock clerk	355	1.3	15		4.2
	Driver	326	1.2	181		55.5
	Hand	318	1.2	11		3.5
	manager	286	1.1	104		36.4
	Mechanics	278	1.0	100		36.0
Counselor's sex						
	Female	6,261	34.2	1,020	5.6	16.3
	Male	3,379	39.7	582	6.8	17.2
Counselor's age						

Below 30	1,041	38.1	161	5.9	15.5
31 - 40	3,619	37.2	635	6.5	17.8
41 - 50	2,489	38.0	374	5.7	15.3
51 +	2,491	32.0	432	5.5	16.8
More than six years of working experience					
No	5,091	34.6	792	5.4	15.6
Yes	4,549	37.7	810	6.7	17.8
Caseload groups					
1 - 35	680	44.6	138	9.1	20.3
36 - 50	2,406	44.8	420	7.8	17.4
51-75	3,601	39.5	607	6.7	16.8
75-180	2,953	27.4	437	4.1	14.8
Having a Master's degree					
No	977	33.0	169	5.7	17.3
Yes	8,663	36.3	1,433	6.0	16.5
Master's degree in Rehabilitation Counseling					
No	3,303	33.6	554	5.6	16.8
Yes	6,337	37.3	1,048	6.2	16.5

Table 4

Impact of Characteristics of Client Participants and Counselor Participants on the Overall Employment and Chances of Obtaining Living Wage Jobs in the Multivariable Models

		Employed		Working for living wage or above ($15/hour+)	
		Odds Ratios	**p value**	**Odds Ratios**	**p value**
Client participants					
Age	15 – 22	Ref		Ref	
	23 - 32	1.01 (0.91, 1.13)	0.84	**1.57 (1.27, 1.94)**	**0.00**
	33 - 45	0.99 (0.88, 1.11)	0.85	**2.18 (1.77, 2.68)**	**0.00**
	46 +	0.90 (0.80, 1.02)	0.11	**2.20 (1.79, 2.71)**	**0.00**
Race	White vs. Other	**1.40 (1.27, 1.53)**	**0.00**	**1.96 (1.55, 2.48)**	**0.00**
Disability siginificance	Most significant vs. significant	**1.17 (1.05, 1.30)**	**0.003**	**0.49 (0.42, 0.57)**	**0.00**
Disability type	Psychological	ref		Ref	
	Cognitive	**1.27 (1.17, 1.39)**	**0.00**	**0.59 (0.46, 0.76)**	**0.00**
	Physical	0.93 (0.78, 1.02)	0.26	**0.54 (0.41, 0.71)**	**0.00**
	Mobility	0.89 (0.78, 1.02)	0.09	0.88 (0.65, 1.19)	0.41
	Manipulative	0.92 (0.80, 1.06)	0.27	1.00 (0.72, 1.39)	0.97
	Hearing	**2.39 (1.79, 3.20)**	**0.00**	**1.84 (1.28, 2.64)**	**0.001**
	Vision	0.89 (0.66, 1.19)	0.43	1.11 (0.61, 2.02)	0.72
	Communicative	**1.70 (1.20, 2.40)**	**0.00**	**0.19 (0.05, 0.67)**	**0.01**
	Other	**0.77 (0.67, 0.89)**	**0.00**	**0.65 (0.49, 0.88)**	**0.005**
Education at application	Less than high school	ref			
	High school diploma	**1.18 (1.07, 1.30)**	**0.001**	0.86 (0.71, 1.05)	0.14
	College or above	**1.18 (1.05, 1.31)**	**0.004**	**1.46 (1.21, 1.78)**	**0.00**
State	CT	ref			
	FL	1.07 (0.81, 1.42)	0.79	0.84 (0.57, 1.23)	0.36
	ID	0.80 (0.64, 0.99)	0.04	**0.63 (0.46, 0.88)**	**0.006**
	UT	**1.91 (1.63, 2.23)**	**0.00**	0.81 (0.65, 1.00)	0.05
Counselor participants					

Male vs. Female		1.02 (0.89, 1.18)	0.76	0.97 (0.82, 1.14)	0.71
Age group	< 30	ref			
	30 - 39	0.89 (0.74, 1.06)	0.20	0.95 (0.72, 1.26)	0.72
	40 - 49	0.94 (0.76, 1.15)	0.51	0.74 (0.56, 1.00)	0.04
	50 +	**0.73 (0.60, 0.89)**	**0.002**	0.87 (0.63, 1.19)	0.37
Annual caseload	1 - 35	ref			
	36 - 50	1.09 (0.85, 1.39)	0.52	0.83 (0.63, 1.08)	0.18
	51-75	0.87 (0.68, 1.10)	0.28	**0.75 (0.58, 0.95)**	**0.02**
	75-180	0.71 (0.53, 0.96)	0.03	0.92 (0.64, 1.32)	0.66
Master's degree vs. other		0.87 (0.70, 1.08)	0.21	0.91 (0.66 ,1.27)	0.60
Rehabilitation counseling vs. other fields		1.09 (0.96, 1.23)	0.21	0.91 (0.77, 1.06)	0.24
Six or more years of experience		**1.32 (1.15, 1.52)**	**0.00**	1.09 (0.90, 1.32)	0.37

Discussion

Our study is the first to examine the impact of both client's and counselor's characteristics on the client's chance of obtaining living wage jobs at a $15/hour level. We found that the rate of living wage employment was only 6% among individuals with disabilities, which accounted for about 17% of overall employment. Using survey data of VR counselors linked with their VR clients, we found that several client's characteristics were important in determining employment outcomes. However, except for the counselor's higher caseload, the counselor's characteristics, such as age, gender, training, and years of experience, were not related to their VR client's chance of obtaining living wage employment.

Our study is consistent with other studies using similar data sources in which client's characteristics affect employment outcomes (Sevak et al., 2015; Sevak et al., 2019). However, our study showed that to support clients with disabilities to obtain a living wage job, we need more research to understand the barriers and enables. Beyond a counselor's training, age, and

years of experience, only a counselor's higher caseload was marginally related to a lower rate of living wage jobs. A higher caseload indicated a higher chance of burnout among counselors, leading to lower quality of services for the clients. This is a direction that deserves more research.

Paid work not only provides a source of income but also allows people to interact with others. Thus is an essential component of well-being for human beings. In addition, achieving economic sufficiency through working is a civil rights issue as well (Ciscel, 2000; Luce, 2022). A living wage job will help individuals with disabilities achieve economic sufficiency and maintain an independent living. The federally mandated minimum wages have not changed since 2009. The real value of the minimal wage decreased over time and now no longer meets the necessary costs to fully participate in society. States also often fail to set the proper wage levels for workers, which further compounds the already complicated living conditions of individuals with disabilities. As shown in the current study, the average hourly wages for most service jobs were well below $15/hour. With an average of $10 per hour wage, the annual income will barely exceed the poverty line for a family of two persons (at an annual income of $19,720 as of 2023).

Therefore, living wage employment should be the benchmark for employment outcomes when evaluating the effectiveness of VR programs (Lustig & Strauser, 2004). Competitive integrated employment will be the main pathway to obtaining living wage jobs (Sundar et al., 2018; Wehman et al., 2018). In addition, legislation and regulations at the federal, state, and municipal levels should be established to ensure a living wage for people who are working. In this study, we set the $15/hour as the grand standard for a living wage, as this is the current goal of the living wage movement in the US. However, according to the estimates based on local living expenses, many places require more than $15/hour for a person with one child to maintain

a decent life (Glasmeier & MIT, 2023). Thus, the rates of living wage should not be set static, but rather be adjusted based on regional differences and for inflationary progression.

Another concern is the type of jobs most individuals with disabilities are channeled into. As shown in the current study and also the 2017 ACS (Day & Taylor, 2019), a large percentage of disabled individuals worked in low-paying jobs such as service workers, assistants, or helpers. Based on the 2017 ACS survey, disabled workers were paid similarly to those without disabilities in these service jobs. Therefore, the best approach to obtaining a living wage job is to prepare disabled individuals with knowledge and skills for higher-paying jobs. However, with the rapid development of technology and the constant changes in job requirements, different knowledge and skills are needed to prepare individuals with disabilities to adapt to new jobs. The current Employment First framework, which, to the author's understanding, is to seek real jobs, secure gainful wages, and make meaningful contributions to society, helps move towards competitive integrated employment. Past research has shown that youth with employment experience before graduation were more likely to obtain employment in a competitive integrated environment (Wehman et al., 2018). Furthermore, the employer's attitude, ongoing career counseling, on-the-job support including on-the-job training, along with strong family support, in addition to robust work experience accumulation before exit were all relevant and important for people with disabilities to obtain gainful employment (Erickson et al., 2014; Lindstrom et al., 2011; Wehman et al., 2018). Finally, hiring people with disabilities may bring benefits to employers, including tax deductions, enhanced collaborations, and work environments (Lindsay et al., 2018).

One main limitation of this study was the small sample size of counselors included in this study. As shown in the current study, many VR counselors had higher caseloads and might not

be available to respond to the survey. A high rate of turnover among VR counselors is also of concern in many states. In addition, VR clients are self-selected individuals who have a desire to work. However, VR counselors also select them as clients who must complete an Individualized Plan for Employment (IPE) evaluation to enter the VR program. In addition, a large percentage of individuals with disabilities are not VR clients, and in fact, about 80% of individuals with disabilities are not in the labor market (BLS, 2023), thus not in the candidate pool of VR clients. Moreover, many other factors, including community resources and the job market, the employer's attitude, family support, and also the client's psychological preparations, may affect the chance of obtaining living wage jobs. More research in this area is needed.

The implications for VR professionals and agencies are multitude. We need to revamp and adapt our VR professional's training to align with the benchmark of obtaining high-quality employment and building connections with the community and employers. In addition, since VR clients are motivated individuals who are willing to work, research on evidence-based interventions should be explored and implemented to improve the rate of living wage employment.

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Appendix

Median Wages for Jobs with ⩽$15/hour

Occupation	Median	IQR
Other service workers	8	(7, 9)
Cashier	9	(8, 10)
Childcare worker	9	(8, 12)
Cleaner	9	(8, 10)
Foodservice	9	(8, 10)
Hand	9	(8, 10)
Stock clerk	9	(8, 10)
Assembler	10	(9, 12)
Cosmetologist	10	(8, 13)
Ground	10	(9, 13)
Guard	10	(9, 11)
Health Assistant	10	(9, 12)
Helper	10	(8, 11)
Production worker	10	(9, 12)
Sales	10	(9, 11)
Service rep	10	(8, 11)
Assistant	10	(9, 13)
Clerk	11	(10, 13)
Others	11	(9, 15)
Analyst	11	(10, 15)
Manager	12	(10, 17)
Mechanics	12	(10, 15)
Social worker	12	(10, 15)
Welder	13	(10, 15)
Computer	13	(11, 17)
Construction	13	(10, 15)
Technician	14	(10, 17)
Electrician	14	(11, 16)
Accountant	15	(12, 20)
Driver	15	(11, 17)
Plumber	15	(13, 18)
Teacher	15	(11, 19)
Therapist	15	(10, 21)

Note: IQR: interquartile range.