



Employment of Certified Peer Specialists in Mental Health Professional Shortage Areas

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Abstract

The current demand for mental health services is exacerbated by an ongoing shortage of behavioral health care providers in the United States. The Health Resources and Services Administration has identified 5,833 Mental Health Professional Shortage Areas (MHPSAs), many of which are rural, and could be served by Certified Peer Specialists (CPSs). This paper examines the relationship between CPS employment and MHPSA residency. Data are from a 2020 survey of 572 CPS certified in one of four states. Random effects logistic regression models were used to test the relationship between MHPSA residence and employment outcomes. Of 166 unique counties identified by participant zip codes, 47 were characterized as being MHPSAs with 14% of participants residing in one of these counties. A higher proportion of those living in MHPSAs were employed in peer support jobs (rather than other job types or unemployed) compared to those living in non-MHPSAs (68% vs. 54%, $p=.020$). MHPSA residential status was not a significant predictor of employment status ($OR=1.14$, $p=.728$) but was significantly associated with greater likelihood of employment in peer support compared to other jobs, both for the entire sample ($OR=2.13$, $p=.026$), and among those currently employed ($OR=2.90$, $p=.032$). The greater likelihood of working in peer support among those residing in MHPSAs suggests that CPSs may leverage their credential to address shortages. As a result, peer support may become a more necessary part of the traditional service array. Policies that enable CPS to practice in MHPSAs should be encouraged.

Keywords Rural mental health services · Certified peer specialists · Healthcare provider shortages · Employment of people with disabilities · Access to care

The United States currently faces an ongoing shortage of behavioral health care providers. In March 2021, the Health Resources and Services Administration (HRSA) identified 5,833 Mental Health Professional Shortage Areas (MHPSAs), which affects an estimated 37% of the population (122 million Americans). HRSA determined that 6,398 mental health providers are needed to fill these gaps (USAFacts, 2021). MHPSAs are designated based on the ratio of

mental health providers (psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, and marriage and family therapists) to residents in specific counties (Ku et al., 2021). These shortages range in severity across the country, with two-thirds of shortage areas in rural or partially rural parts of the country (USAFacts, 2021). The workforce shortage in behavioral health is compounded by an increasing demand for mental health services due to expansion of insurance and screening programs, as well as demographic and policy trends such as returning veterans, an aging population, and re-integration of formerly incarcerated individuals (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013) as well as the youth mental health crisis (U.S. Department of Health and Human Services, 2023).

At the same time, the COVID-19 pandemic, “long COVID,” (Wang et al., 2022) and the ongoing effects of social isolation and economic instability, have added to the need for behavioral health and disability services (Penninx

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et al., 2022). More than one in five American adults have a mental health condition, but less than half of those receive care (SAMHSA, 2022). In a 2022 interview, the US Surgeon General noted the country's mental health crisis as one of biggest current health challenges (Dr. Vivek Murthy US Surgeon General, 2022).

One response by state mental health authorities to this workforce shortage is promoting the use of paid peer specialist (Peer Recovery Center of Excellence, 2023), with many states investing in Certified Peer Specialist (CPS) training and certification (SAMHSA, 2013). CPSs are mental health workers who have personal experience of a psychiatric disorder and use their lived experience of recovery combined with skills learned in formal training to help other people with psychiatric disorders (Chen, 2017; Daniels et al., 2012; Peer Recovery Center of Excellence, 2023). CPSs are employed in different types of behavioral health programs, often resulting in varying job activities and roles. The settings in which peer support workers are employed range from outreach to outpatient to inpatient programs, including vocational rehabilitation, crisis services, drop-in centers, and residential programs (Salzer, 2010). The peer role and diverse duties they are required to perform fluctuate based on each position, which may include tasks related to providing peer support or administrative tasks such as documentation and transportation (Daniels et al., 2017; Salzer, 2010).

Research on general medical professional shortage areas highlights the unique challenges to attracting and retaining health care providers in these regions (Schlak et al., 2022). Low compensation, high-turnover, workplace burnout, and the cost of a graduate education often required for these jobs affects recruitment and retention of qualified mental health workers (Government Accountability Office [GAO], 2022). These challenges have led to the use of alternative, yet qualified, providers to meet the health care needs of underserved populations. For example, in areas with primary care provider shortages, nurse practitioners and physicians' assistants are employed (Xue et al., 2018), while in areas with dentist shortages, dental health aid therapists are used to supplement care (Waldrop & Gee, 2022). Alternative providers are thus a promising workforce to meet health care needs in HPSA settings, especially if their scopes of practice are expanded by favorable state policies and legislation (Xue et al., 2018). In the case of behavioral health provider shortages, it is argued that peer support workers are an under-used resource in mental health services globally (Puschner et al., 2019). CPSs enhance the behavioral health workforce, rather than replacing clinical service providers (GAO, 2018; Peer Recovery Center of Excellence, 2023), by expanding and improving services as well as addressing the service provider shortage (Gagne et al., 2018). A

recent White House fact sheet asserts the need for multiple approaches to ameliorate the mental health workforce crisis and calls for piloting new approaches to training peer specialists and other behavioral health paraprofessionals (The White House, 2022).

State policies and legislation that expand the scope of practice for peer support workers include making services Medicaid-reimbursable, effectively integrating peer roles within different provider organizations, and enhancing peer supervision (Mancini, 2018; Page et al., 2020). As of now, CPS services are recognized by the Centers for Medicare and Medicaid Services as a billable service in state Medicaid Plans (Page et al., 2020), and the CPS workforce is among the fastest growing in behavioral healthcare (Jones et al., 2019). As of 2022, 40 states allow Medicaid billing for behavioral health peer support services (Kaiser Family Foundation, 2022).

A recent systematic review and meta-analysis of randomized studies of peer support services found peer support in general had a small positive effect on personal recovery, decreased anxiety symptoms, and positive contributions to self-advocacy (Høgh Egmo et al., 2023). Earlier reviews similarly found positive outcomes for peer support compared with professional staff in terms of reduced inpatient service use, improved relationship with providers, better engagement with care, and higher levels of empowerment (Chinman et al., 2014). Other reviews of peer support research have found positive impacts on self-efficacy, personal empowerment, reductions in crisis service utilization, and positive impacts on community integration outcomes such as employment (Davidson & Guy, 2012; Nelson et al., 2006). In addition to these positive treatment outcomes, one study demonstrated that peer specialists contribute to increased service use and decreased health disparities among minority youth (Ojeda et al., 2021). Another study found that peer support in rural communities could reduce barriers to mental health help-seeking (Cheesmond et al., 2020). These studies reinforce the peer specialist workforce as uniquely positioned to address barriers around access to care, especially in MHPSAs.

This study examines whether the prevalence of CPS employment varies by residing in MHPSA vs. non-MHPSA areas. We hypothesized that while general employment rates would not differ for CPSs living in MHPSAs compared to non-MHPSAs, rates of employment in the health system as peer support workers would be greater for CPSs living in MHPSAs versus non-MHPSAs.

Methods

Sample

The CPS Career Outcomes Study was approved as exempt by the [redacted] Institutional Review Board. The study PI and research assistants who developed study procedures and conducted study recruitment were people with lived experience of the behavioral health system. The sample of 681 participants was recruited from adults who completed a peer specialist certification in one of four participating states in different regions of the United States: (northeast [Pennsylvania], southeast [North Carolina], southwest [Texas], and west coast [Oregon]). These states were chosen based on having large cohorts of graduating CPSs in 2019 and availability of CPS contact information for the research. The states that did not maintain a public database of certification either shared their master list of CPSs or obtained consent from CPSs to share their contact information with researchers. Recruitment efforts included mailing a letter introducing the study, sending an email with a personalized survey link to an online informed consent form and survey, and providing reminders through email, phone calls, and text messages. All individual participants completed the informed consent and only those that agreed to participate moved onto the survey and were included in the study. Additional details of study recruitment procedures and sample are described elsewhere (Ostrow et al. 2022a).

Measures

Participant survey data were collected online from March to October 2020 using Qualtrics. The survey included validated measures along with items developed by the research team, all of which were reviewed by a five-person advisory group comprised of experts in peer support and peer support training/certification. In the online survey, respondents were asked about demographic characteristics, including age, gender, race, ethnicity, education, veteran status, and receipt of Social Security Disability Insurance (SSDI) or Supplemental Security Income (SSI) benefits. Participant zip codes were used to identify rural/small town residence versus more populous residential area (USDA Economic Research Service, 2020).

In addition to demographic characteristics, additional survey measures included in the current study were those identified in prior research as being significant predictors of employment in any job, or in peer support positions in this population (Ostrow et al., 2022a), including: depressive disorder diagnosis, outpatient mental health services use, willingness to disclose psychiatric history at work, employment

history, physical health status, years since CPS certification, and local area unemployment rate.

Depressive disorder was based on participant report of having received a formal clinical diagnosis of depression without schizophrenia or bipolar disorder. Participants reported on any use of outpatient mental health counseling or psychotherapy in the past year. They were asked about patterns of disclosure of psychiatric history at work to colleagues, and responses were coded as never willing to disclose (versus sometimes or always) at a peer support or other job. Respondents were asked about their employment history in the 5 years prior to the survey in 2020, which was coded as continuous versus intermittent or no employment. Participant physical health was assessed using a self-report item with a scale from 1 (poor) to 5 (excellent). Years since CPS certification was calculated from participant report of certification date. Respondent zip codes were used to identify the average county unemployment rate in 2020 (U.S. Bureau of Labor Statistics, 2021).

Respondents reported the characteristics of all positions held at the time of the survey, including: job title; location; and responsibilities. They also reported whether the position was a peer support job and, if so, whether certification or training were required for that job. Based on this information, jobs were coded by research staff as being either peer support (PS) positions or other job types. Employment outcomes were coded as any employment, PS job versus other job type or unemployment, and PS job versus other job type among employed respondents.

Survey participants provided their residential zip codes which were cross-walked with county and used to characterize them as residing in an MHPSA or a non-MHPSA. MHPSAs, as designated by the federal Health Resources and Services Administration (HRSA), were identified from Area Health Resource Files [<https://data.hrsa.gov/tools/shortage-area/hpsa-find>]. The files were searched for each of the 4 states included in the study, with the following selection criteria: all counties; mental health discipline as the type of provider shortage area (as opposed to primary care or dental care); designated health professional shortage area status (as opposed to withdrawn or proposed for withdrawal); geographic shortage areas (as opposed to population-specific or facilities-specific shortage areas); all shortage area scores (range from 0 to 26); all rural status (including rural, partially rural, non-rural, and unknown); and calendar year 2020. Partial shortage areas were included as MHPSAs given that prior research has shown that a high proportion of the populations of both partial and total shortage areas have high levels of health risk factors (Streeter et al., 2020). While counties are grouped within states in the multilevel models to account for regulatory and practice differences, as a condition of participation, states were assured that results

would not be reported publicly by state; therefore analysis does not examine differences across or between states.

Prior research has identified other potential predictors of CPS employment in multiple fields, including Social Security disability beneficiary status, veteran status, use of outpatient counseling or therapy, and willingness to disclose mental health status in the workplace (Ostrow et al., 2022a). That research also identified correlates of employment specifically in behavioral health such as a depressive disorder diagnosis and living in an area with lower unemployment rates (Ostrow et al., 2022a). Thus, these predictors were included in the models used for examining the relationship between MHPSAs and employment among CPSs.

Statistical Analysis

Descriptive statistics were calculated and associations between participant characteristics, employment outcomes, and residence in an MHPSA were examined using chi-squared and t-tests. Given the multilevel nature of the data, with respondents nested within counties, random effects logistic regression models (RRM) were used to test the relationship between MHPSA residence and employment outcomes among CPS with county as the random effect. Collinearity among model predictive variables was evaluated using measures of correlation: Pearson correlation for linear measures, point-biserial for nominal and linear measures, and phi for nominal measures. A correlation coefficient of >0.5 was considered evidence of potential collinearity and reason to limit simultaneous entry in the multivariable model. All tests were two-sided with significance set at $p < .05$. Analyses were conducted using SAS 9.4 and SPSS version 28.

Results

Of 681 respondents who consented to the online survey, 591 provided data on their current employment status and 572 provided valid residential zip codes in the four recruitment States. The study's 572 respondents lived in 166 unique counties across the four states (North Carolina, $n=163$; Oregon, $n=62$; Pennsylvania, $n=221$; Texas, $n=126$). Counties averaged 3.5 ± 5.4 respondents per county with a minimum-maximum of 1 to 49, and a median of 2. Among the 166 counties, 28% (47/166) were a MHPSA. Among the 572 respondents, 14% (78/572) lived in the 47 counties characterized as being MHPSA geographic areas, including 44 whole and 3 partial shortage area counties.

Participant characteristics in total and by MHPSA residence are shown in Table 1. The majority of study participants were female ($N=376$; 66%). Most identified as white

race ($N=397$; 69%), followed by Black/African American ($N=138$; 24%), and other non-white/non-Black ($N=37$; 7%); 9% ($N=52$) identified as Latinx. Only 16% ($N=90$) reported receiving SSDI income and even fewer reported SSI ($N=25$; 4%); 11% ($N=64$) were veterans. Participants were an average of 47 ± 12 years old; 15% ($N=87$) reported an educational level of high school or less, 39% ($N=223$) some college, and 46% ($N=262$) an associate's degree or higher. Overall, only 5% ($N=31$) lived in a rural/small town setting rather than more populous area.

Almost half reported a depressive disorder diagnosis without a bipolar or schizophrenia spectrum diagnosis ($N=235$; 41%). Just over half reported use of outpatient mental health services in the past year ($N=297$; 55%). In terms of work history, 41% ($N=234$) had worked continuously in the past 5 years. On a scale from 1 (lowest) to 5 (highest), self-rated physical health was rated an average of 3.0 ± 1.0 . Respondents reported an average of 2.5 ± 3.0 years since receiving their CPS certification. County unemployment rate in 2020 averaged $8.3\% \pm 1.7$.

Participant characteristics associated with residing in a MHPSA were white race, rural/small town setting, less outpatient mental health services use, and more continuous prior work history. White participants represented 69% of all respondents but 87% of those living in MHPSAs; while 24% of all participants were Black/African American, they represented only 9% of those living in MHPSAs ($p=.001$). Those living in rural or small-town areas were more often in MHPSA counties than non-MHPSA counties (24% vs. 2%, $p<.001$). A lower proportion of respondents living in MHPSAs reported any use of outpatient mental health services in the past 12 months compared to those in non-MHPSAs (42% vs. 58%, $p=.012$). A higher proportion of those living in MHPSAs reported continual employment in the prior 5 years compared to those living in non-MHPSAs (53% vs. 39%, $p=.025$). Since none of the predictor variables in Table 1, including MHPSA status, were correlated at >0.35 , all were retained for the multivariable analysis.

Unadjusted employment outcomes are shown in Fig. 1. Most of the 572 participants were employed at the time of the survey ($N=437$; 76%); including 78% in MHPSAs and 76% in non-MHPSAs ($p=.686$). A higher proportion of those living in MHPSAs were employed in PS jobs (rather than other job types or unemployed) compared to those living in non-MHPSAs (68% vs. 54%, $p=.020$). This difference was more striking when examining employment in PS jobs rather than other types of jobs among those employed: 87% of those employed in MHPSAs were in PS jobs compared to 71% of those employed in non-MHPSAs ($p=.008$).

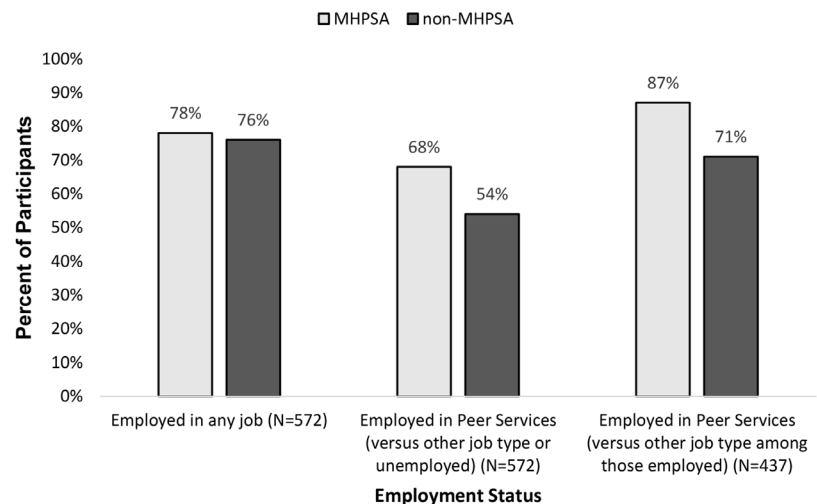
In the first multivariable multilevel model predicting any employment versus unemployment, residing in an MHPSA was not a significant predictor ($OR=1.14$,

Table 1 Participant characteristics (N = 572): total and by mental health provider shortage area

Participant Characteristics	Total		Residence in MHPSA County N = 78		Residence in Non-MHPSA County N = 494		p-value
	Percent ^a	N	Percent ^a	N	Percent ^a	N	
Gender	66	376	71	55	65	321	0.412
Female	31	176	28	22	31	154	
Male	4	20	1	1	4	19	
Transgender/Genderqueer/Non-binary/Other identity							
Race	69	397	87	68	67	329	0.001
White	24	138	9	7	27	131	
Black/African American	7	37	4	3	7	34	
Other non-white							
Latinx	9	52	9	7	9	45	0.969
Social Security Disability Income (SSDI)	16	90	21	16	15	74	0.212
Supplemental Security Income (SSI)	4	25	1	1	5	24	0.151
Veteran	11	64	12	9	11	55	0.916
Education	15	87	24	19	14	68	0.053
High school or less	39	223	35	27	40	196	
Some college	46	262	41	32	47	230	
Any degree							
Rural or small-town residence area	5	31	24	19	2	12	<0.001
Depressive disorders without bipolar or schizophrenia	41	235	44	34	41	201	0.628
Outpatient mental health counseling, therapy services past year	55	297	42	32	58	265	0.012
Employed all months in past 5 years	41	234	53	41	39	193	0.025
Never willing to disclose psychiatric history at any job	9	46	12	9	8	37	0.265
	Mean ± SD		Mean ± SD		Mean ± SD		
Age, years	46.7 ± 12.0	571	47.6 ± 11.9	78	46.5 ± 11.8	493	0.454
Self-reported physical health	3.0 ± 1.0	539	2.8 ± 1.0	76	3.0 ± 1.1	463	0.145
Years since Certification	2.5 ± 3.0	572	2.9 ± 3.4	78	2.4 ± 2.9	494	0.135
County unemployment rate 2020	8.3 ± 1.7	572	8.0 ± 1.6	78	8.3 ± 1.7	494	0.184

Note: SD = standard deviation

^a Percent excluding missing data. Percents may sum to > 100% due to rounding.

Fig. 1 Any employment and employment in peer services by mental health provider shortage area

$p = .728$) (Table 2). Predictors of employment, adjusting for MHPSA status, were prior work history ($OR = 1.99$, $p = .011$) and years since CPS certification ($OR = 1.15$, $p = .009$). Lower likelihood of employment was associated with SSDI ($OR = 0.46$, $p = .013$), SSI ($OR = 0.30$, $p = .018$),

and unwillingness to disclose psychiatric history at any job ($OR = 0.41$, $p = .021$).

In the second model, MHPSA residential status was significantly associated with greater likelihood of employment in a PS job compared to other job type or unemployment

Table 2 Random effects logistic regression models predicting any employment and peer services employment

	Model 1: Any Employment (versus no employment) N = 437/572			Model 2: Peer Services Employment (vs. other job type or no employment) N = 319/572			Model 3: Peer Services Employment (vs. other job type) N = 319/437 ^a		
	Odds Ratio	95% Confidence Limits	p-value	Odds Ratio	95% Confidence Limits	p-value	Odds Ratio	95% Confidence Limits	p-value
MHPSA County	1.14	0.54	0.728	2.13	1.10	4.14	2.90	1.10	7.67
Female	1.25	0.74	0.405	0.90	0.58	1.41	0.76	0.42	1.38
Black	1.18	0.65	0.582	0.96	0.59	1.57	0.85	0.47	1.55
Other non-white	1.05	0.42	0.914	1.33	0.59	3.00	1.39	0.46	4.15
Latinx	0.77	0.35	0.521	0.98	0.50	1.91	1.25	0.50	3.11
SSDI	0.46	0.25	0.013	0.55	0.31	0.97	0.80	0.37	1.73
SSI	0.30	0.11	0.018	0.49	0.18	1.33	1.03	0.19	5.48
Veteran	0.63	0.31	0.196	0.70	0.37	1.33	0.86	0.37	2.03
Some College	0.65	0.31	0.252	0.95	0.52	1.76	1.15	0.53	2.47
Any Degree	0.86	0.41	0.694	1.00	0.55	1.83	1.06	0.50	2.25
Rural/Small-town area	0.53	0.18	0.251	0.53	0.20	1.42	0.68	0.18	2.55
Depressive disorder	0.81	0.48	0.445	1.40	0.91	2.16	1.99	1.18	3.37
Used outpatient MH Services past year	0.61	0.36	0.061	0.71	0.47	1.09	0.88	0.51	1.53
Worked All 5 prior years	1.99	1.17	0.011	1.63	1.07	2.49	1.27	0.75	2.16
Never Willing to Disclose	0.41	0.19	0.021	0.17	0.07	0.42	0.18	0.07	0.50
Age, years	0.99	0.96	0.174	1.00	0.98	1.01	1.00	0.98	1.03
Self-rated physical health	1.19	0.94	0.151	1.07	0.88	1.31	1.02	0.79	1.32
Years Since Certification	1.15	1.04	0.009	1.13	1.04	1.22	1.08	0.98	1.19
Unemployment Rate	0.97	0.85	0.704	0.91	0.81	1.02	0.89	0.77	1.02

^a Model 3 only included participants who were currently employed.

(OR=2.13, $p=.026$). In this model, greater likelihood of holding a PS job was associated with prior work history (OR=1.63, $p=.024$) and years since certification (OR=1.13, $p=.004$). Lower likelihood of PS employment was associated with unwillingness to disclose psychiatric history at any job (OR=0.17, $p=.000$) and SSDI beneficiary status (OR=0.55, $p=.039$). In the third model, among those who were employed ($n=437$), MHPSA residential status was again significantly associated with greater likelihood of employment in a PS job rather than another type of job (OR=2.90, $p=.032$). Greater likelihood of employment in PS jobs among those employed and adjusting for MHPSA status was associated with depressive disorder (OR=1.99, $p=.011$); while lower likelihood was associated with unwillingness to disclose psychiatric history (OR=0.18, $p=.001$).

Discussion

The results of the study confirmed the primary hypotheses. We found that residence in an MHPSA was not associated with higher rates or greater likelihood of any employment, but residence in an MHPSA was associated with significantly higher rates of employment in peer support (PS) jobs and greater likelihood of employment in PS jobs, adjusting for other known predictors of peer support employment.

Thus, mental health professional shortages may provide greater opportunities for work and career development among CPSs, and provide incentives for people with lived experience to obtain their certification. These findings may also inform how behavioral health administrators address shortages by investing in an expanded CPS workforce (SAMHSA, 2013).

The results confirmed that residing in a rural or small-town setting was associated with greater likelihood of also living in a mental health provider shortage area. This is the case for the general U.S. population, in which two-thirds of shortage areas are rural or partially rural (USAFacts, 2021). However, only 6% of our total sample lived in rural settings, which is considerably lower than the 14% of the whole U.S. population living in rural/non-metro areas in 2020 (Dobis et al., 2021). This low prevalence of rural dwellers in our sample may explain the lower prevalence of participants residing in MHPSA counties in our study. While an estimated 37% of the U.S. population lives in an MHPSA (USAFacts, 2021), only 14% of our study sample lived in MHPSAs. The National Council for Behavioral Health reports that 77% of counties across the country have severe shortages of behavioral health professions (Nenn, 2023), whereas 28% of the counties in our sample were MHPSAs. It may be that the CPSs in the 4 states we included were less likely to live in

rural areas because of limited access to peer support certification programs in rural areas.

At the same time, there is an even greater need for mental health professionals in rural areas. Many individuals reporting mental health concerns are concentrated in rural areas, where the health professional shortage is worse and where stigma against professional help-seeking adds an additional barrier (Mongelli et al., 2020; Morales et al., 2020). Expanding and nurturing the CPS workforce may require accommodating peers living in rural areas by providing remote access to on-line training programs to address the shortage needs of these areas. However, equitable internet access in rural areas remains a policy challenge in the United States (117th Congress, 2021). Improving broadband internet access not only accommodates peers living in rural areas but also expands access to care for other individuals residing in these areas (Benda et al., 2020). Internet access is now considered a social determinant of health, meaning individuals with limited internet access also tend to experience barriers around access to health care services, including behavioral health, further supporting the need for improved access to both internet and services (Benda et al., 2020; Rubin, 2021). Other policy solutions might include financial incentives for relocating to rural and underserved areas after certification, and financial assistance for professional education, as is the case with other health professionals (Waldrop & Gee, 2022).

Our findings may be underestimates of the potential for employment of CPS in MHPSAs. More speculatively, these findings may reflect the positive impact of employed CPSs in ameliorating some of the disadvantages of MHPSAs, although we cannot address this possibility directly with these data. Future research could study the temporal relationship between rates of CPS employment and MHPSA status.

Other predictors of employment and employment in peer support positions were consistent with findings in the parent study, such as the negative relationship of SSDI to employment and the lower likelihood of employment and PS jobs among those who do not disclose their mental health status at work. Other findings of the parent study were that employment in peer support positions is associated with lower work-related burnout and greater job satisfaction than other positions (Ostrow et al. 2022b), but is not associated with higher pay or financial well-being (Ostrow et al. 2023). Addressing the mental health professional shortage through expanding the CPS workforce may be aided by improved pay and compensation for peer support positions. Additionally, adequate compensation, recognition and acknowledgement, and growth opportunities help promote satisfaction and increase job tenure of peer specialists (Shalaby & Agyapong, 2020). Support for this expansion requires administrators to focus efforts on defining the peer

role and their scope of practice. Previous studies examining the implementation of peer services recommend clarifying these roles, yet this challenge continues to be discussed and has been magnified by the institutionalization of peer support (Adams, 2020; Cabral et al., 2013; Mancini, 2018). Further exploration and development of the CPS scope of practice will be essential as the workforce branches into MHPSAs, as these areas have different and possibly more complex service needs (Benda et al., 2020; Morales et al., 2020).

Limitations

The study sample is not nationally representative and was not randomly selected, which limits the generalizability of the findings. However, we did recruit from all recently certified CPSs in four regionally diverse states. Generalizability is also limited as result of all participating states allowing Medicaid billing for peer support services through their state plans. These results may not be representative of states that do not fund peer support with Medicaid dollars or ones that fund reimbursement through other mechanisms, such as an 1115 waiver. While the four states offered Medicaid reimbursement, only three had adopted Medicaid expansion, with two of those implementing expansion at the time of data collection (Kaiser Family Foundation, 2022). Medicaid expansion status may be an important variable impacting our models but is not presented in our results due to the agreement with states to preserve anonymity between the four. Future research should explore the possible impact Medicaid expansion status has on CPS employment in MHPSAs. In addition, recruitment was conducted at the beginning of the COVID-19 pandemic, and this may have altered responses and response rates. Moreover, study data consist entirely of respondent self-report, which may have been subject to recall and positive response biases. Future research may want to examine differences between states' training and certification processes and how these differences may influence employment in peer services. In order to provide clarity around peer roles and contribute to better defined scope of practice, it is important to examine how the peer role varies across diverse work settings, including peer services offered in underserved areas.

Conclusion

In conclusion, the greater likelihood of working in peer specialist positions among those residing in counties with mental health provider shortages suggests that certified peer specialists may derive and employment-related benefit from workforce gaps as they help to bridge the negative effects

of shortages. Shortages may act to stimulate acceptance of peer support as part of the traditional service array, promoting a greater emphasis on development of recovery-oriented systems of care. What remains is to develop labor force policies and practices that encourage this trend, including favorable state policies and legislation that reflects the full extent of CPS's training and certification (Xue et al., 2018), while continuing to generate substantive evidence of improved outcomes among peer support service recipients.

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Author's contributions All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Laysha Ostrow, Morgan Pelot and Jane Burke-Miller. The first draft of the manuscript was written by Jane Burke-Miller and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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Data Availability The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Declarations

Ethics approval This is an observational study. The questionnaire and methodology for this study was approved by the Temple University Institutional Review Board (protocol identification number 26512) and adheres to the tenets of the Declaration of Helsinki. Authors adhered to the minimum reporting guidelines specified in EQUATOR Network's STROBE checklist for cross-sectional studies.

Consent for publication The research involved human subjects and informed consent was obtained from all participants.

Competing interests The authors have no competing interests to declare that are relevant to the content of this article.

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