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The Direct Support Workforce: An Examination of Direct Support Professionals and Frontline Supervisors During COVID-19

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Abstract:	Direct Support Professionals (DSPs) and Frontline Supervisors (FLSs) have critical roles in home and community-based services for people with intellectual and developmental disabilities. Low wages and high levels of responsibility created a long-term crisis in recruitment and retention and are exacerbated by COVID-19 pandemic. A national sample of DSPs and FLSs were compared on demographics and work-related circumstances using data from the third Direct Support Workforce COVID-19 Survey. Significant differences were found in demographics, hours worked, wages, wage augmentations, and quality of work-life. Policy recommendations to address the worsening workforce crisis are provided.

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Dear Editor,

Thank you for giving us the opportunity to submit a revised draft of our manuscript “The Direct Support Workforce: An Examination of Direct Support Professionals and Frontline Supervisors During COVID-19” for further review in the journal *Intellectual and Developmental Disabilities*. We appreciate the time and effort that you and the reviewers put into providing feedback on our manuscript. We also appreciate the comments and suggestions which have made valuable improvements to our paper. We have addressed and incorporated most of the suggestions made by the reviewers. Those changes are in the table below. Thank you.

Reviewer #1 Critique	**Response**
General	
My main suggestions are: 1) Extend the analyses to examine factors associated with covid related outcomes. 2) Be concise. 3) Provide citations for key claims. 4) Clarify how this study fits with the other covid DSP studies cited.	Thank you for all of the feedback. We’ve addressed your suggestions. See detail below. We also updated to APA7 format per journal requirements.
Abstract	
No comments	--
Introduction	
Cite research that supports your claim that the workforce is "under-recognized" (perhaps Kinder, 2020). Explain what you mean by under-recognized. Cite research showing a link between being under-recognized and turnover, vacancy rates or burnout.	Thank you for this suggestion. We added sentences and citations to this claim. We also explained under-recognized and added the requested literature.
Move the 3rd paragraph into the description of the workforce section.	Thank you for the suggestion. We moved this paragraph to the workforce description section and expanded it.
Arrange the introduction by data source (NCI studies, DPS covid surveys, Cimarolli, 2021; Kinder 2020b) and population (the general aging and disability workforce versus DSPs and FLS in IDD). Specify sample sizes, and for the covid studies when each study was conducted (month and year if available).	We considered this suggestion but decided to keep the introduction and literature review in the original order as ordering by data source didn’t allow for smooth flow in telling our story. Sample sizes and dates for the COVID studies were originally included in the text; however, we added them in the few places where they were not.
Cite specific research describing how covid has exacerbated workforce shortages. (What research did the NCD report cite?)	Thank you for this suggestion. We added details from NCD as suggested. We also added from an ANCOR report.
Report findings from the series of DSP surveys (Hewitt et al., 2020, 2021a, 2021b) together.	As mentioned in a previous response, we discussed this suggestion, however, we decided to

Reviewer #1 Critique	Response
	leave the data reported in the place they made sense per the story being told rather than by data source.
Clarify how this article relates to the series. How is this manuscript different than Hewitt, et al., (2021b)?	The series of DSP surveys (Hewitt et al., 2020, 2021a, 2021b) were examinations of the impact of COVID-19 on the DSP workforce at 3 different points in time. They were reported for the overall workforce of DSPs and FLSs combined. This manuscript selected several key indicators where we wanted to explore differences between DSPs and FLSs and gain more detailed insight.
Does the finding "More than half (54%) reported that their work-life worsened)" come from the same round of data collection as you describe in the results? If so, it would be better placed in the results section.	The finding “More than half (54%) reported that their work-life worsened” does come from the same round of data collection described in the results. However, the results describe differences in perspective and experience of DSPs and FLSs separately. This statement reflects the overall sample of this report; therefore, we left it in the literature review.
Study Purpose	
The lit review focuses on the DSP workforce, but your research questions focus on the comparison between DSPs and FLSs. For those research questions, the lit review should describe previous research on the similarities and differences between DSPs and FLSs.	Per your suggestion, we updated the title of the manuscript to more accurately depict the study purpose. We added a paragraph about the dearth of literature available comparing DSPs and FLSs. We updated the study purpose paragraph to clarify more explicitly the purpose.
This paper would make a stronger contribution to the literature if instead of simply comparing DSPs and FLSs you go on to explore factors associated with differences in covid related. For example, you might explore these research questions. 1. What factors are associated with differences in reported work-life quality a year into the covid-19 pandemic? Potential factors to explore include demographic characteristics, work role (FLS vs DSP), primary work setting (residential, vocational…), pre-pandemic hours worked and wages, and covid related work experiences (additional hours worked, post-pandemic wages, percent getting a wage augmentation, percent getting a lump sum bonus, or amount of the wage augmentation). 2. What factors were associated with the	Thank you for this suggestion. These research questions are interesting and important. The purpose of this manuscript was to explore differences between FLSs and DSPs given the sparse data available on them and to also explore some of the differences between them with respect to specific COVID-19 outcomes. We appreciate the suggestion; however, these additional hypotheses move into predictive modeling and are beyond the scope of this manuscript. They would tell another story themselves which we will consider for a future manuscript.

Reviewer #1 Critique	Response
number of extra hours staff worked or with whether a person worked extra hours or not (e.g., household income, pre-pandemic hours worked, being a primary earner, age, education, non-white race)?	
Methodology	
Instrument	
Please be more specific about who you are referring to when you say information was sent to "our contacts."	The contacts are listed in the following sentence which was rewritten to be clearer. "Information about the survey and how to access it was posted on our website and circulated on social media. It was also promoted and distributed to DSPs and disability organizations across the country by The National Alliance for Direct Support Professionals (NADSP), The Arc, the American Network of Community Options and Resources (ANCOR), and the National Association of State Directors of Developmental Disabilities Services (NASDDDS)."
Sample	
What are "duplicate testers?"	We clarified duplicate testers by adding: "(those who provided the optional name and/or email address items and could be verified to have taken it more than once)"
You list the number of valid responses as 5,356 then as 5,242 and mentioned for both that you excluded those who were not FLSs or DSPs. Please clarify.	We revisited this section of the manuscript. No exclusions were mentioned in our text. The paragraph states that 5,356 was the overall number of participants with usable data. The last sentence explains that only DSPs and FLSs were included in the analytic sample of 5,242.
Region - It is unclear why you reported region. In the results you note that the geographic location of DSPs and FLSs were significantly different but not why that difference matters. Is there research suggesting that Census Region is a relevant predictor of DSP or FLS outcomes?	We wanted to describe and acknowledge differences in the sample. After further discussion, your point is well taken. We agree that it doesn't fit in this manuscript and have removed it.
Race - you list American Indian or Native American as one racial group. FYI, the U.S. DHHS race category is described as American Indian or Alaska Native.	Thank you for pointing this out. This is the wording on the survey but we will be more mindful as we develop further surveys.
Household income - did you have a specific rational for why you chose the income categories (e.g., is one the income threshold for the poverty rate)?	We have used these categories in our previous work, including the earlier DSP Workforce COVID-19 Surveys. We kept them the same for consistency in the 3rd survey of the series.

Reviewer #1 Critique	Response
Setting - How did you instruct respondents who worked in more than one type of setting to respond?	The survey asks where the participant provides the majority of services to people. We added this clarification to the text. **"Setting Worked In** was a single item asking where the participant provided the majority of their services to people with four response categories: agency or facility, family or individual home, community employment or job site, and another site not included in the options (e.g., community non-employment (recreation, fun), school setting, telehealth/virtual)."
Analysis - Did you adjust alpha to account for the number of analyses included? If not, this should be mentioned in the study limitations section.	Thank you for this reminder. Alpha was adjusted to account for number of comparisons (.05/15 = 0.003). This impacted 1 of the comparisons (primary wage earner) that had been previously significant. The text and tables were updated to reflect this.
Results	
Demographics - The first paragraph can be deleted. Start by describing gender identity and ethnicity overall, since they did not differ, then go right into describing Table 1. For Table 1, the subscripts a and b are not needed because you are only comparing 2 groups. If the p value indicates a significant difference, we know that the difference is between DSPs and FLSs.	Thank you for this suggestion. The first paragraph was removed. We wanted to highlight the significant differences so presented them first with a sentence at the end acknowledging those variables that were not significant. Subscripts were kept in all tables. The p-value indicates that the overall Chi-square was significant. By this we know that the 2 groups differ significantly. The purpose of using the PROP subcommand (which produces the subscripts) is that it provides a test for which response options are actually significantly different. The difference between groups may be for all but not necessarily. This allows us to specify where that significant difference lies.
Hours worked- Try this… "There were statistically significant differences between FLS and DSPs in both pre-pandemic hours, and additional hours worked due to the pandemic. A higher proportion of FLSs worked 41 or more hours pre-pandemic (53% versus 30%). Supervisors were also more likely to work 16 or more extra hours due to Covid (43% versus 35%). DSPs were more likely to report not working any additional hours due to covid (41% versus 27%)."	Thank you for the more succinct wording. We adapted our wording, although we only reported those rows from Table 2 where there were significant differences.

Reviewer #1 Critique	Response
Wages and worker type- Consider using a two-way analysis looking at both differences between DSP and FLS and change in wage over time.	This is an interesting suggestion. We discussed this addition. While we did look at differences in pre-pandemic and current wages, separately, our hypotheses did not reflect change over time. We elected to focus on each time point separately.
Wage augmentation - Consider this wording "There were no statistically significant differences in the percentage of DSPs (26%) and FLSs (27%) who received a wage augmentation or bonus…. About a quarter (24%) of both groups received a lump sum bonus. Supervisors were more likely to get an augmentation of $2.01 or more per hour (40% for FLS versus 31% for DSPs)….."	Thank you for the more succinct wording. We adapted our wording, although we only reported those rows from Table 3 where there were significant differences.
Quality of work life- "Finally, supervisors were significantly more like to report that their work life was worse (31%) or much worse (13%), than were DSPs (24% and 8% respectively)."	Thank you for the more succinct wording. We adapted our wording.
Discussion	
The numeric report of findings from the first paragraph should be worked into the results section.	The first paragraph gave a description of the entire sample. For the discussion, findings from that paragraph are reported for DSPs and FLSs separately.
Describe the extent to which your sample is similar to or different than other studies of DSPs and FLS (e.g., National Core Indicators).	Thank you for this suggestion. We added comparison data for DSPs and FLSs.
Clarify the timing of the findings discussed in the second paragraph. Do you mean to say, "Previous studies found that the proportion of DSPs reporting staffing shortages increased from 26% at the beginning of the pandemic (Hewitt et al., 2020) to 50% 6 months later (Hewitt, et al., 2021a). Now, 12 months into the pandemic, 59% of DSPs and 73% of FLS reported working extra hours due to covid. The extra hours worked by FLS…?"	Thank you for the wording suggestion. We have adapted our wording accordingly.
Your conclusion, "The toll of working…," would be stronger if the analysis examined whether working extra hours, getting a lump sum bonus, or getting a wage increment is associated with reporting worse work life quality for DSPs and/or FLSs.	The purpose of this manuscript was to explore differences between FLSs and DSPs given the sparse data available on them and to also explore some of the differences between them with respect to specific COVID-19 outcomes. We did not intend to do multivariate models but acknowledge this suggestion would be interesting for a future manuscript.

Reviewer #1 Critique	Response
Rather than referring generally to the McCall report, cite the specific relevant finding (e.g., an estimated 91% of CNAs and HHAs who were displaced from the workforce in 2020, were still out of the workforce in 2021).	Thank you for the suggestion. We rewrote that sentence to provide the specific findings.
You say that "Nationwide there are reports of group homes closing" but the studies cited were only for three states. Unless you have a national study to cite, it would be better to say "Studies in several states reported…."	Thank you. Per your suggestion we have adjusted the wording to more accurately reflect the cited studies.
Limitations	
Given the concern noted about sample sizes for certain categories, it might be better to combine categories for the relevant variables before running the analysis. For example, education level could be collapsed into high school or less, some college or a two-year degree, and 4-year degree or more; Income could be dichotomized into less than $40,000 and $40,000 or more; and hours worked could be collapsed into 30 hours or less, 31 to 40 hours and 40 hours or more. Collapsing the categories makes it easier to explain the results and reduces the inclusion of categories with few responses.	Thank you for this suggestion. After discussion, while there are a few response options where we wish there were more FLSs, we really do want to talk about differences in more detail rather than combined groups. Most variables of interest to us were kept as is; however, we did collapse annual household incomes of $100,000 to $199,999 and Over $200,000 into Over $100,000 as this is how we have treated this item in previous work.
Say more about the last sentence "the work tenure inflates observed wages". Why do you think that? What finding are you referring to?	This was a good suggestion. We have added text to make our statement clearer.
Conclusions	
I disagree with the assertion that increasing the sample size makes the sample more representative. It would be better to describe the extent to which the characteristics of the sample are like or different than characteristics of DSPs from more representative sources (e.g., NCI).	Thank you for this critique. We have rewritten the sentence to clarify the authors' intention.
Citations are needed to support the list of "effective" strategies.	We added citations to support the effective strategies discussed.
Policy recommendations	
1) I agree that establishing a standard occupational classification would be helpful, but how would having that classification help?	We expanded on this text and citations explaining the benefit of an occupational classification.
2) Family status - the McCall paper includes findings about caregiving that would strengthen this recommendation.	Thank you. We added text about parents with children re-entry into the workforce and McCall citation.

Reviewer #1 Critique	Response
3) Reimbursement rates and living wages - need to cite evidence that the lack of a living wage is an underlying cause of the workforce crisis.	We added text and a citation to this recommendation.
Final paragraph - spell out the CARES acronym. Also, provide a bit more information about CARES and ARPA funding - what is it, what can it be used for, why is it relevant to this paper?	Per your suggestions, CARES was spelled out. We also rewrote and expanded on this section to provide more information about the programs and how they could be used.
Last sentence - reword. Nothing in the paper that explains the 60 years reference. Make a case based on the data presented in this paper that the workforce is not earning a livable wage.	Thank you for this suggestion. We removed the sentence in question and rewrote this part to flow more smoothly from the CARES and ARPA funding.
Reviewer #2 Critique	**Response**
Concurred with the suggestions of Reviewer. Address contextual issues such as productive workplace and geographical/cultural issues.	Thank you for this suggestion. We have addressed all of the suggestions put forth by Reviewer #1 which address contextual issues regarding workplace and geographical/cultural issues.

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Acknowledgments

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We would like to thank the National Alliance of Direct Support Professionals (NADSP) for their partnership on this work.

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The Direct Support Workforce: An Examination of Direct Support Professionals and Frontline Supervisors During COVID-19

Abstract

Direct Support Professionals (DSPs) and Frontline Supervisors (FLSs) have critical roles in home and community-based services for people with intellectual and developmental disabilities. Low wages and high levels of responsibility created a long-term crisis in recruitment and retention and are exacerbated by COVID-19 pandemic. A national sample of DSPs and FLSs were compared on demographics and work-related circumstances using data from the third Direct Support Workforce COVID-19 Survey. Significant differences were found in demographics, hours worked, wages, wage augmentations, and quality of work-life. Policy recommendations to address the worsening workforce crisis are provided.

Keywords: Direct Support Professionals, Frontline Supervisors, Workforce Issues, COVID-19, IDD

Direct Support Professionals (DSPs) and Frontline Supervisors (FLSs) are instrumental in providing home and community-based services to persons with intellectual and developmental disabilities (IDD). DSPs provide various supports that include meeting individual needs related to health, social connections, employment, and other aspects of community living. FLSs often provide a significant amount of direct support to persons with IDD too, but their primary role is to guide and direct the work of DSPs. The work of DSPs and FLSs is the linchpin of state and national efforts to enact the full inclusion and participation of people with disabilities in their communities. However, this workforce is under-valued as demonstrated by the low wages and lack of benefits as noted in a report to the President about the direct support workforce crisis (Hewitt et al., 2017). DSPs report that the supports and services they provide go unrecognized and that they have risked their lives during the pandemic to offer supports and services to individuals with disabilities during the pandemic (Kinder, 2020a).

Before the COVID-19 pandemic, there were 4.6 million people in the direct support workforce in 2019 (Campbell et al., 2021). The growth in the aging population from 47.8 million to 88 million by 2050 will increase the number of workers needed to provide these services (PCPID, 2018; Campbell et al., 2021). It is estimated that there will be an additional 1.3 million in-home care jobs created between 2016 and 2028 which will make this the largest growing occupation in the United States economy (Campbell et al., 2021).

Description of the Workforce

Bogenschutz and colleagues (2014) described DSPs as "those workers who provide person-to-person assistance to people in need of daily support in activities of daily living, household tasks, personal health and safety, community access and integration, relationships, work, and a multitude of other activities." The U.S. Bureau of Labor Statistics does not have an official

classification for this essential workforce. This has likely contributed to many workforce issues such as wage compression because it is impossible to make direct comparisons of duties and wages with similar occupations. Because there is no occupational classification for DSPs, it's possible they are put into the classifications of Personal Care Assistant (PCA) or Home Health Aide (HHA) (Bureau of Labor Statistics, 2021). The lack a DOL classification makes it more difficult to clearly identify the DSP workforce in size, job responsibilities and compensation and to compare this workforce to other similar job classifications.

The largest source of data about DSPs is the National Core Indicators Staff Stability Survey (NCI, 2020). The NCI Staff Stability Survey collects information from service providers about wages, benefits, turnover and other pertinent staff information. According to NCI, the average wage for DSPs in 2019 was $12.00 per hour (NCI, 2020). Forty-two percent of workers in this industry receive public assistance (Campbell et al., 2021). Low wages paired with a high level of responsibility for providing supports to people with significant support needs has likely contributed to the high turnover (42.8%) and vacancy rates (11.2%) of this workforce (NCI, 2020). Additionally, Pettingell and colleagues (2022) found that incentives (e.g., wage bonuses, paid time off, access to health insurance and/or retirement benefits, pay incentive or referral bonus programs) by themselves did not have a positive association with DSP retention. Rather, staff wages were the most prominent factor related to differences in DSP retention in addition to the state where the organization was located.

There is less information available about FLSs. Like the DSP role, FLS is not an identified occupation by the Bureau of Labor and Statistics, leading to the same challenges related to data describing the FLS workforce. However, a study of the direct support workforce

that included FLSs found an average wage of $15.45 per hour and an annual turnover rate of 12.2% (Bogenschutz et al., 2014).

In 2017, the direct support workforce was predominantly female (86%) and people of color (49%). Twenty-six percent of the workforce were immigrants. It is also an aging workforce with an average age of 41 years and 24% of workers aged 55 and older (Campbell et al., 2021). In the National Core Indicator (NCI) Staff Stability 2020 Survey, agencies reported that DSPs were predominantly female (73.3%). Over 1/3 (38.0%) identified as White, 37.3% Black or African American, 5.6% Hispanic, 1.9% Asian, 1.4% more than one race/ethnicity, 1.0% Pacific Islander, and 0.8% for American Indian or Alaska Native and Other, respectively. Fifteen percent (15.4%) of DSPs had been employed less than 6 months, 14.3% between 6 to 12 months, 18.7% between 12 to 24 months, 12.5% between 24 and 36 months, and 39.0% 36 months or more. FLSs were also largely female (75.7%); however, they were more likely to be White (46.0%) compared to DSPs. Additionally, 33.6% of FLSs identified as Black or African American, 5.1% Hispanic, 2.1% Asian, 1.2% more than one race/ethnicity, 1.0% American Indian or Alaska Native, and 0.8% Pacific Islander and Other, respectively (NCI, 2022). There is less information available about FLSs then DSPs.

Demographic data on FLSs and DSPs from numerous fields (e.g., child mental health, individuals with IDD) vary consistently across several demographic factors. However, research comparing the two is scant. According to research conducted between 2014-2021, FLSs tended to have higher educational attainment than DSPs. FLSs were more likely to have 4-year degrees (25-38% FLSs vs 17% DSPs) and post-graduate education (11-28.4% FLSs vs 7% DSPs) and were less likely to only have a high-school diploma or GED (17-19% FLSs vs 29% DSPs) compared to DSPs (Hewitt et al., 2021; Patterson Silver Wolf et al., 2014). Race demographic

differences were also consistent across fields. A higher percentage of supervisors were White (75.2-76%) compared to DSPs (72%) while fewer supervisors were Black/ African American (15.8-18%) compared to DSPs (14%; Hewitt et al., 2021; Patterson Silver Wolf et al., 2014). When looking at gender demographics, FLSs tended to have a higher percentage of women (including transgender women) (87%) than DSPs (83%) (Hewitt et al., 2021). FLSs also had a lower percentage of men (including transgender men) (16%) compared to DSPs (13%).

COVID-19 Impact on the Workforce

In their report to the President, the National Council on Disability (NCD) (2021) notes that the shortage of direct support workers has been exacerbated by the COVID-19 pandemic. Prior to the pandemic, this workforce experienced difficult working circumstances, limited benefits, and low wages which played a role in job turnover. With the pandemic, understaffing, increased work challenges, lack of hazard pay, paid leave and childcare with closed schools, and fear of catching or spreading COVID-19 led to additional turnover (National Council on Disability, NCD, 2021). Another study found similar factors related to turnover with the additional difficulty experienced in keeping current staff and recruiting new staff with industries that had paid comparable wages in the past now paying more than they did and, in some cases, unemployment paying more than they did. Additionally, discontinuation of services, delays in launching new programs, and turning away new referrals impact the need for being able to keep current and attract new DSPs and FLSs (Dawson & Luechtefeld, 2021). The National Council on Disability (2021) also noted the difficulty in gauging the full effects of the pandemic on this workforce due to the lack of complete occupational data, which leaves some classes of workers undercounted or not counted.

A qualitative study conducted during the pandemic with home health care workers noted that these workers felt like they were invisible and not respected (Sterling et al., 2020). Little attention was paid to this workforce in the beginning of the pandemic. Many workers reported a lack of adequate training to prevent COVID-19 transmission and no access to PPE despite the close contact people providing direct support often have with the people they support (Kinder, 2020a; Allison et al., 2020 Sterling et al., 2020). In the spring of 2020, 46% of DSPs and FLSs in an online survey of 8,914 respondents reported having access to medical grade facemasks (Hewitt et al., 2020). In a follow-up survey of 8,846 DSPs and FLSs in the fall of 2020, 63% reported access to paper or disposable face masks, 36% medical grade face masks, and 36% fabric facemasks (purchased, not homemade) (Hewitt, Pettingell, Kramme, et al., 2021). By summer of 2021, in a follow-up survey of 5,356 DSPs and FLSs, 91% reported they had sufficient PPE; however, one-fifth (20%) reported they had to pay out of pocket for their PPE (Hewitt, Pettingell, Bershadsky, et al., 2021).

An online survey of 478 DSPs reported that 84% believed they were at risk for contracting COVID-19. However, 95% reported that they knew how to protect themselves and the people they supported (LoPorto & Spina, 2021). In the summer of 2021, 57% of DSPs and FLSs reported exposure to COVID-19 with 19% indicating a positive COVID-19 diagnosis (Hewitt, Pettingell, Bershadsky, et al., 2021). Pandemic-related challenges such as increased workload demands along with understaffing and the risk of COVID-19 transmission were also reported by workers in age-related support services (Cimarolli & Bryant, 2021). Nearly three in ten of these workers reported challenges such as financial hardships, separation from family members, and challenges with meeting the needs of their families (Cimarolli & Bryant, 2021). Workers in home-and community-based services were more likely to report challenges than

those in facility-based settings such as assisted living or nursing homes (Cimarolli & Bryant, 2021). DSPs and FLSs also reported workplace challenges. In the spring of 2020, 26% of DSPs and FLSs responding to an online survey (8,914 respondents) reported being short-staffed (Hewitt et al., 2020). In November of 2020, 50% of DSPs and FLSs in a follow-up survey (8,846 respondents) reported that their workplace was short-staffed (Hewitt, Pettingell, Kramme, et al., 2021). By summer of 2021, more than half of 5,356 DSPs and FLSs (54%) reported that their work-life had worsened during the pandemic (Hewitt, Pettingell, Bershadsky, et al., 2021). An increase in hours and responsibilities can lead to exhaustion, stress, and detachment, all factors in the development of burnout (Hewitt & Larson 2007; Skirrow & Hatton, 2006). These factors are likely contributing to the current workforce crisis with high turnover and vacancy rates (NCI, 2022; NCD, 2021; Sterling et al., 2020).

As of August 2021, a third of the states had publicly available data about HCBS service sites and the impact of coronavirus on enrollees and vaccination rates (Watts et al., 2021). Staffing shortages since the start of the pandemic have been particularly notable on in-home and group home services. Adult day programs and supported employment programs were closed for extended periods of time in order to comply with social distancing measures. McCall and colleagues (2021) found that 4%, or 168,370 DSPs, were displaced from their jobs within the first three months of the pandemic. Nine percent, or 14,770 workers, of these displaced workers re-entered the workforce by March of 2021, however, none had returned to direct support work. The remaining 91%, or 153,610, direct care workers remained out of the workforce at the end of the first quarter of 2021.

During the pandemic, several bills were passed at the federal level that provided additional funds to states to address the workforce challenges caused by the COVID-19

pandemic for essential workforce sectors. However, DSPs were not always beneficiaries of these efforts. For example, the Families First Corona Virus Response Act (FFCRA) of 2020 provided emergency paid sick leave for essential workers. However, according to the National Council on Disability, certain employers, such as home care agencies, were allowed to exclude DSPs if they chose (NCD, 2021). Any of the provisions of FFCRA aimed at providing assistance to essential workers excluded independent contractors. This means that DSPs hired directly by individuals using self-directed programs could not access emergency paid sick leave or any of the other provisions of this act (NCD, 2021). A survey of DSPs supporting people with aging-related needs in HCBS settings identified financial hardships as one of their main challenges (Cimarolli & Bryant, 2021).

Some states used funds provided by the Coronavirus Aid, Relief, and Economic Security (CARES) act to temporarily increase pay to essential workers. The implementation varied across states. Some provided a one-time payment, while others provided a temporary hourly pay increase (Kinder, 2020b). The hazard pay is no longer being paid in most cases despite the continuation of the COVID-19 pandemic. Due to the previously discussed difficulties in identifying the DSP and FLS workforce, there is a lack of comprehensive data enabling a complete understanding of how these programs have affected DSPs and FLSs.

Purpose of the Study

The purpose of this study was to explore the similarities and differences between DSPs and FLSs in the direct support workforce. Given the dearth of data comparing these groups and their work circumstances, our goal was to compare DSPs and FLSs on demographics and work issues during the COVID-19 pandemic. The research questions included:

1. Do DSPs and FLSs differ on demographic characteristics?

2. Do DSPs and FLSs differ with respect to their working hours before and during the COVID-19 pandemic?
3. Do DSPs and FLSs differ on their wages and wage augmentations during the COVID-19 pandemic?
4. Do DSPs and FLSs differ in how they view their work-life status during the COVID-19 pandemic?

Method

Instrument

The Direct Support Workforce 12-month Survey was the third in a series of three online surveys. It was launched using the online survey platform Qualtrics on June 1, 2021 and closed on July 25, 2021. Information about the survey and how to access it was posted on our website and circulated on social media. It was also promoted and distributed to DSPs and disability organizations across the country by The National Alliance for Direct Support Professionals (NADSP), The Arc, the American Network of Community Options and Resources (ANCOR), and the National Association of State Directors of Developmental Disabilities Services (NASDDDS). The survey contained ten items about respondent characteristics, nine items about wages and work hours, five items related to staffing, three items addressing COVID-19 safety measures at their place of employment, seven items about the individuals whom the respondents supported, eight items on well-being and work-life, 11 items about vaccination experiences, and eight items on demographic information. Two additional optional items asked respondents for their name and email address.

Sample

There were 7,366 surveys submitted in Qualtrics. Of those, 13% opened the link without answering any items, 11% reported they were DSPs or FLSs but only answered the first three questions or left the survey blank, 3% were not FLSs or DSPs, < 1% were duplicate testers (those who provided the optional name and/or email address items and could be verified to have taken it a second time), and <1% resided outside the United States. This left a usable sample of 5,356 respondents who were located in nearly all 50 states, the District of Columbia, Guam, and Puerto Rico. There were 4 states with no respondents (7%), 33 states or territories that had 1-100 respondents (61%), 9 states that had 101-250 respondents (17%), 5 states that had 251-400 respondents (9%), and 3 states that had more than 400 respondents (6%). Only DSPs and FLSs were included in analyses, therefore, the final analytic sample had 5,242 respondents. Of those 4,295 (82%) were DSPs and 947 (18%) were FLSs.

Variables

Demographic Variables

- **Age** was a continuous measure.
- **Gender Identity** was a single item with four categories: woman including transgender woman, man including transgender man, non-binary, and prefer to self-describe.
- **Race** was a single item with six categories: American Indian or Native American, Asian, Black or African American, White, Some Other Race, or Two or More Races. Race groups were collapsed into Black or African American, White, and Other to explore the relationship with work role (DSP vs. FLS). Due to the small number of respondents in each category, the “Other” group included Asian, American Indian/Native American, Some Other Race, and Two or More Races.

- **Ethnicity** was a single item with two categories: No, I am not of Hispanic, Latino, or Spanish origin, and Yes.
- **Education Level** was a single item with six categories: post-graduate education, a 4-year degree, some college, a 2-year degree, a high school diploma or GED, and less than a high school diploma.
- **Household Income** was a single item with five options: over $100,000, $40,000 to $99,999, $22,000 to $39,999, $15,000 to $21, 999, and $14,999 or less.
- **Setting Worked In** was a single item asking where the participant provided the majority of their services to people with four response categories: agency or facility, family or individual home, community employment or job site, and another site not included in the options (e.g., community non-employment (recreation, fun), school setting, telehealth/virtual).
- **Primary Wage Earner in the Household** was a single item with two categories: yes and no.

Hours, Wages, and Work-Life Variables

- **Number of Hours Worked Per Week Before the Pandemic** was a single item with five categories: less than 15 hours, 16-30 hours, 31-40 hours, 41-50 hours, and 51+ hours.
- **Number of Additional Hours Worked Per Week Due to the Pandemic** was a single item with five categories: none, 1-15 hours, 16-30 hours, 31-40 hours, 40+ hours.
- **Hourly Wage Pre-pandemic** was a continuous measure.
- **Current Hourly Wage** was a continuous measure.
- **Receiving a COVID-19 Wage Augmentation or Bonus** was a single item with two categories: yes and no.

- **Amount of COVID-19 Wage Augmentation or Bonus** was a single item with six categories: $0.01 to $1.00 per hour, $1.01 to $2.00 per hour, $2.01 to $3.00 per hour, $3.01 to $4.00 per hour, more than $4.01 per hour, and a lump sum bonus.
- **Since the Beginning of the Pandemic, Work-life Status** was a single item with five categories: much better, better, the same, worse, and much worse.

Analysis

All analyses were conducted in SPSS version 27 (IBM Corporation, 2020). Frequency distributions provided descriptive statistics. Crosstabulation tables with Chi-square tests (χ^2) and t-tests were run to examine differences between DSPs and FLSs. Analyses were evaluated at alpha level ($\alpha = 0.003$) adjusting for the number of comparisons.

Results

Descriptive Results

Demographics

There were 5,242 respondents who were either DSPs (82%) or FLSs (18%) in the analytic sample. The average age was 45 years (*SD* = 13 years). Over four-fifths (83%) identified as women, including transgender women, 15% as men including transgender men, and 1% non-binary and preferred to self-describe, respectively. Nearly three-fourths (73%) identified as white, 19% as Black or African American, 2% as American Indian or Native American, 1% as Asian, 2% as another race not listed as an option, and 4% as two or more races. Additionally, 6% came from a Hispanic, Latino, or Spanish heritage. Fewer than 2% did not have a high school diploma, 25% had a high school diploma or GED, 15% had a 2-year degree, 30% had some college, 20% had a 4-year degree, and 8% had post-graduate education. Nearly two-thirds (63%) of respondents provided the majority of services in agency or facility sites, 28% in family or

individual homes, 7% in community employment or job sites, and 2% in other settings. Nearly three-fourths (71%) are the primary wage earner in their households. Four percent of respondents had an annual household income of $14,999 or less, 10% $15,000 to $21, 999, 35% $22,000 to $39,999, 43% $40,000 to $99,999, 8% over $100,000. Lastly, two-thirds (66%) worked for their primary employer for more than 36 months, 10% between 24 to 36 months, 11% between 12 to 24 months, 8% between 6 to 12 months, and 5% less than 6 months.

Demographic Comparisons Between DSPs and FLSs

There were significant differences between DSPs and FLSs on demographic characteristics. As seen in Table 1, There were statistically significant differences between DSPs and FLSs with respect to race, $\chi^2(2) = 34.264$, $p < 0.001$. DSPs had a significantly higher percentage indicate Black or African American compared to FLSs (20% vs. 11%), while FLSs had a significantly higher percentage indicate White compared to DSPs (80% vs. 71%).

There were statistically significant differences between DSPs and FLSs on education level, $\chi^2(5) = 93.905$, $p < 0.001$. DSPs had a significantly higher percentage with a high school diploma or GED (27% vs. 17%), a significantly higher percentage with a 2-year degree (31% vs. 26%), and a significantly lower percentage of 4-year degrees (18% vs. 29%). Statistically significant differences were also present between DSPs and FLSs for annual household income, $\chi^2(4) = 234.802$, $p < 0.001$. DSPs had significantly higher percentages of annual household incomes of $14,999 or less (5% vs. 1%), $15,999 to $21,999 (12% vs. 2%), and $22,000 to $39,999 (37% to 23%). FLSs had significantly higher percentages making $40,000 to $99,999 (39% vs. 62%) and over $100,000 (7% vs. 12%). DSPs were significantly older ($M = 45$ years; $SD = 14$ years), on average, than FLSs ($M = 44$ years; $SD = 12$ years) (see Table 1), $t(1,420) = 3.500$, $p = 0.002$. There was a significantly lower percentage of DSPs working in agency or

facility settings (59% vs. 76%) and significantly higher percentages in family or individual homes (31% vs. 17%) and community employment or job sites (8% vs. 5%) compared to FLSs. These differences were statistically significant, $\chi^2(3) = 94.959$, $p < 0.001$ (see Table 1).

There were no statistically significant differences between DSPs and FLSs on gender identity, $\chi^2(3) = 6.619$, $p = 0.085$, ethnicity, $\chi^2(1) = 0.882$, $p = 0.348$, and primary wage earner in their household, $\chi^2(1) = 4.383$, $p = 0.036$.

Insert Table 1

Comparisons Between DSPs and FLSs on Hours Worked

Hours worked before the beginning of the COVID-19 pandemic and additional hours worked due to the COVID-19 pandemic were examined between DSPs and FLSs. As seen in Table 2, there were statistically significant differences between DSPs and FLSs in the number of hours worked weekly before the COVID-19 pandemic, $\chi^2(4) = 293.617$, $p < 0.001$, and additional hours worked weekly due to the pandemic, $\chi^2(4) = 71.692$, $p < 0.001$. A significantly higher percentage of FLSs worked 16 or more hours pre-pandemic (43% versus 21%). DSPs were significantly more likely to report not working any additional hours due to covid (41% versus 27%) while a significantly higher percentage of FLSs reported working an additional 1 to 15 hours weekly due to the pandemic.

Insert Table 2

Comparisons Between DSPs and FLSs on Wages and Wage Augmentations

Hourly wages, both pre-pandemic and current, and wage augmentations due to the COVID-19 pandemic were examined between DSPs and FLSs. As seen in Table 3, DSPs (M = \$14.18; SD = \$3.37) on average were making significantly less pre-pandemic per hour than FLSs (M = \$18.10; SD = \$5.48), $t(1{,}016) = -20.284$, $p < 0.001$. The same trend was seen with respect to current wages. DSPs (M = \$14.60; SD = \$3.21) were currently making significantly less per hour, on average, than FLSs (M = \$18.86; SD = \$5.51), $t(986) = -21.936$, $p < 0.001$. Of note, both groups had experienced increases in average wages during the pandemic.

DSPs and FLSs were asked about receiving a wage augmentation or bonus because of the COVID-19 pandemic. There were no statistically significant differences in percentage of DSPs (26%) and FLSs (27%) receiving a COVID-19 wage augmentation or bonus, $\chi^2(1) = 0.424$, $p = 0.515$. However, for those DSPs and FLSs who did receive a wage augmentation or bonus due to COVID-19, there were significant differences in the amount received, $\chi^2(5) = 19.588$, $p = 0.001$. A significantly higher percentage of DSPs received \$0.01 to \$1.00 per hour (18% vs. 9%) while FLSs had a significantly higher percentage who received \$2.01 to \$3.00 per hour (33% vs. 22%). About a quarter (24%) of both groups received a lump sum bonus.

Insert Table 3

Comparisons Between DSPs and FLSs on Quality of Work Life Since the Beginning of the COVID-19 Pandemic

Finally, DSPs and FLSs differed significantly regarding their perspective of their work-life status compared to the beginning of the COVID-19 pandemic, $\chi^2(4) = 43.012$, $p < 0.001$. DSPs had significantly higher percentages of feeling their work-life was better (19% vs. 16%) whereas

FLSs were significantly more likely to report their work-life was worse (31% vs. 24%) or much worse (13% vs. 8%) than DSPs (see Table 4).

Insert Table 4

Discussion

The respondents to this survey were predominantly female (DSPs, 83%; FLS, 86%) which is consistent with other data (NCI, 2022; Campbell et al., 2021; Kinder, 2020a). They were also largely white (DSPs, 81%; FLS, 86%) which is higher than other studies. Campbell et al. (2021) reported 49% were people of color in 2017. In 2020, NCI data showed only 38.0% of DSPs and 46% of FLSs identified as white (NCI, 2022). The majority of DSPs (72%) and FLSs (68%) were the primary wage earners in their household. However, the DSPs in this sample were more likely to report an income of less than $22,000 per year (17%) than were FLSs (3%). FLSs were more likely to report making $40,000 per year or more (75% vs 45%). The average hourly wage increased slightly for both DSPs and FLSs during the pandemic ($0.42 for DSPs and $0.76 for FLSs). The increase in pay may be related to wage enhancements provided from COVID-19 relief packages, however, nearly 75% of DSPs and FLSs reported that they did not receive a wage augmentation. Given the high-risk nature of their jobs during a pandemic, identifying ways to increase their wages as essential workers during pandemics is important.

As noted previously, a survey of DSPs conducted by this research team six months into the pandemic showed that the staffing shortage had worsened during the pandemic with an increase from 26% at the beginning of the pandemic (Hewitt et al., 2020) to 50% six months later (Hewitt, Pettingell, Kramme, et al., 2021). Now, 12 months into the pandemic, 59% of

DSPs and 73% of FLSs reported working more hours due to COVID-19. For DSPs, 24% reported working 1-15 additional hours per week while15% reported working an additional 40 or more hours per week. One-third (34%) of FLSs worked an additional 1-15 hours per week and 18% reported working an additional 40 hours per week. The additional hours worked by FLS may reflect that the FLS position is often a salaried position and the expectation in many agencies is that FLS will cover open shifts in the settings that they supervise. Providers must recognize and reward the sacrifices made by FLSs to ensure the provision of services to individuals needing support. Considering the important role that FLSs play in guiding, directing and supporting DSPs, the failure to do so will only add to staffing shortage.

The toll of working additional hours (and not receiving wage augmentation) was evident in the views of work life quality reported by DSPs and FLSs. Nearly half (44%) of FLSs reported that their work life was worse or much worse. About 1/3 of DSPs (32%) also reported a decline in work-life quality. The decline in work-life quality is likely deepening the workforce crisis that existed before the pandemic. McCall and colleagues (2021) reported that an estimated 91% of the direct care workers displaced from the workforce in 2020 had not returned to their same occupation in 2021 which is one indication of the need to urgently address the workforce crisis before the system collapses. Studies in several states reported of group homes closing and the cessation of other kinds of supports due to the lack of available staff (for example, in Florida, Minnesota, and New York) (McGivern, 2021; Moore, 2021; Steiner, 2022). Efforts to address these compounded workforce issues must be implemented on national, state, and local levels to ensure that community living remains a viable option for individuals with intellectual and developmental disabilities.

Limitations

This study has several limitations. While statistical significance was found in many of the relationships, there were a few cell sizes that were small (e.g., annual household income, weekly hours worked before the COVID-19 pandemic, and wage augmentation amounts). The sample was large yet it is important to recognize that the survey methods used a convenience sampling approach and thus generalization should be avoided. Another limitation of this study is that participation by people of color was lower than expected compared to other studies. Additionally, the years of service of this sample, with 66% having been at their primary employer for 36 months or longer, may have contributed to a higher wage than has been reported in other studies. Because wages often rise with tenure, this may be particularly true given the high levels of turnover reported in this field (e.g., NCI, 2020)

Conclusion and Policy Recommendations

Whereas our sample was not as diverse as other national samples (e.g., NCI 2020; NCI, 2022), the experiences of these respondents' mirrors that of other studies and is likely an accurate reflection of the state of the direct support workforce. The challenges facing this workforce existed before the pandemic, as did the lack of attention to the crisis by policy makers. There are practices that providers can implement that have been shown to be effective in recruiting and retaining DSPs and FLSs. These practices include:

1) Marketing campaigns to promote direct support work (e.g., McCall et al., 2021),
2) Increasing base wages to make the positions more competitive (e.g., McCall et al, 2021),
3) Implementing evidence-based retention strategies such as realistic job previews, competency-based orientation and training, career paths, and mentoring (e.g., Hewitt & Larson, 2007), and
4) Improved support for FLSs from organization leadership (e.g., Hewitt & Larson, 2007).

Although there are things that providers can do to address the crisis, the issue is largely systemic and requires systemic solutions on federal and state levels. Important policy recommendations for addressing the DSP and FLS workforce crisis include:

1) The U.S. Department of Labor needs to establish a standard occupational classification (SOC) code for DSPs (Hewitt, Pettingell, Kramme, et al., 2021) to identify this specific workforce and ensure that federal and local policies specifically include DSPs and FLSs. Having a SOC code for DSPs would allow DSPs to be categorized based on the skill requirements for their work rather than being inaccurately lumped into classifications with PCAs or HHAs (Bureau of Labor Statistics, 2021), would provide the mechanism for appropriately setting reimbursement rates for services provided by DSPs and would create the capacity to consistently identify staffing needs and gaps in services (NADSP, 2018).
2) DSPs are primary wage earners and often single parents (Hewitt et al., 2019; PHI, 2019). McCall et al. (2021) found that 16% of men and 10% of women with children were less likely to re-enter the workforce then men without children at home. Access to affordable childcare and strategies that connect DSPs to childcare and other supports is essential for this workforce's continued participation in providing supports (McCall et al., 2021). The pandemic only exacerbated the challenges workers have in finding affordable, reliable childcare.
3) Policy makers need to address the underlying causes for the workforce crisis including reimbursement rates for long term services and supports so that it is possible to provide a living wage for the DSPs and FLSs who do this essential work. Low wages have been shown to be a predictor for high turnover (Houseworth et al., 2021), therefore, increasing

wages and Medicaid funding would provide agencies the opportunity to offer living wages and benefits. This may in turn ameliorate some of the factors contributing to high turnover.

The Coronavirus Aid, Relief and Economic Security (CARES) Act and the American Rescue Plan Act (ARPA) provided important assistance for providers to address workforce issues during the pandemic. The CARES Act, for example, included a Provider Relief Fund for provision of health care services, including community-based organizations to compensate for pandemic related expenses and lost revenue (KFF Foundation 2020; UCP & ANCOR, 2022). The CARES Act ended in 2021. ARPA, enacted in 2021, specifically targeted funding for Medicaid-funded home- and community-based services (HCBS) by allowing states to apply for a 10 percentage-point increase to the federal matching rate (known as "FMAP," or the Federal Medical Assistance Percentage). The intention of this funding was to strengthen states' HCBS programs and services (KFF, 2021; UCP & ANCOR, 2022). Among the allowed expenditures include programs aimed at workforce recruitment and retention (KFF, 2021). While this program officially ended in March of 2022, states have until the end of 2024 to obligate the funds and until 2026 to spend the funds (Center on Budget Policies and Priorities, CBPP, 2022). According to the CBPP (2022), 40 states, the District of Columbia, and all of the territories have devoted ARPA funds to human services, while 47 states, the District of Columbia, and four territories have allocated ARPA funds to health care, which includes mental health services and health care organizations. While the CARES Act helped stabilize community-based providers during the pandemic, ARPA has the potential for providing a foundation for improving working conditions for DSPs and addressing recruitment and retention challenges. However, states need to be

creating policies and practices that sustain and programs developed during ARPA to ensure a more stable and competent workforce into the future.

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Table 1 Click here to access/download;Table;Pettingell et al DSP FLS Comparison Table 1.docx

Table 1. *Demographic Comparisons Between Direct Support Professionals (DSPs) and Frontline Supervisors (FLSs)*

Variable	DSPs		FLSs		
Gender Identity	N	%	N	%	*p*-value
Man (including transgender man)	556	16.0 [a]	104	13.0 [b]	0.085
Woman (including transgender woman)	291	83.0 [a]	701	86.0 [b]	
Non-binary	38	1.0 [a]	6	1.0 [a]	
Prefer to self-describe	24	<1.0 [a]	3	<1.0 [a]	
Total	3,534	100.0	814	100.0	
Race	N	%	N	%	*p*-value
Black or African American	693	20.0 [a]	91	11.0 [b]	**<0.001**
White	2,418	71.0 [a]	633	80.0 [b]	
Other	308	9.0 [a]	68	9.0 [a]	
Total	3,419	100.0	792	100.0	
Hispanic, Latino, or Spanish Background	N	%	N	%	*p*-value
Yes	197	6.0 [a]	53	7.0 [a]	0.348
No	3,209	94.0 [a]	743	93.0 [a]	
Total	3,406	100.0	796	100.0	
Education Level	N	%	N	%	
Less than high school	71	2.0 [a]	8	1.0 [a]	**<0.001**
High school diploma or GED	983	27.0 [a]	138	17.0 [b]	
Some college	540	15.0 [a]	126	15.0 [a]	
2-year degree	1,102	31.0 [a]	212	26.0 [b]	
4-year degree	661	18.0 [a]	241	29.0 [b]	
Post-graduate education	269	7.0 [a]	98	12.0 [b]	
Total	3,626	100.0	823	100.0	
Annual Household Income	N	%	N	%	
$14,999 or less	156	5.0 [a]	4	1.0 [b]	**<0.001**
$15,000 to $21,999	375	12.0 [a]	15	2.0 [b]	
$22,000 to $39,999	1,220	37.0 [a]	172	23.0 [b]	
$40,000 to $99,999	1,239	39.0 [a]	474	62.0 [b]	
Over $100,000	218	7.0 [a]	95	12.0 [b]	
Total	3,208	100.0	760	100.0	
Type of Work Setting	N	%	N	%	
Agency or facility	2,560	59.0 [a]	717	76.0 [b]	**<0.001**
Family or individual home	1,321	31.0 [a]	156	17.0 [b]	
Community employment or job site	330	8.0 [a]	51	5.0 [b]	

Other site	83	2.0 [a]	23	2.0 [a]	
Total	4,294	100.0	947	100.0	
Primary Wage Earner in Household	N	%	N	%	
Yes	3,066	72.0 [a]	646	68.0 [b]	0.036
No	1,206	28.0 [a]	299	32.0 [b]	
Total	4,272	100.0 [a]	945	100.0	
Age (average)	45 years		44 years		**0.002**

Note: Subscript letters [a] and [a] in a row indicate column proportions do not differ significantly at the 0.05 level. Subscript letters [a] and [b] in a row indicate column proportions differ significantly at the 0.05 level. *P*-values in bold represent relationships that are significant at the 0.003 level.

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Table 2. *Weekly Hours Worked Comparisons Between Direct Support Professionals (DSPs) and Frontline Supervisors (FLSs)*

Weekly Hours Worked Pre-pandemic	DSPs		FLSs		*p*-value
	N	%	N	%	
Less than 15 hours	269	6.0[a]	3	<1[b]	**<0.001**
16 to 30 hours	568	13.0 [a]	19	2.0 [b]	
31 to 40 hours	2,147	51.0 [a]	419	45.0 [b]	
41 to 50 hours	894	21.0 [a]	402	43.0 [b]	
51+ hours	378	9.0 [a]	96	10.0 [a]	
Total	4,256	100.0	939	100.0	
Additional Weekly Hours Due to COVID-19	N	%	N	%	*p*-value
None	1,667	41.0 [a]	244	27.0 [b]	**<0.001**
1 to 15 hours	980	24.0 [a]	307	34.0 [b]	
16 to 30 hours	493	12.0 [a]	128	14.0 [a]	
31 to 40 hours	326	8.0 [a]	64	7.0 [a]	
40+ hours	619	15.0 [a]	159	18.0 [a]	
Total	4,085	100.0	902	100.0	

Note. Subscript letters [a] and [a] in a row indicate column proportions do not differ significantly at the 0.05 level. Subscript letters [a] and [b] in a row indicate column proportions differ significantly at the 0.05 level. *P*-values in bold represent relationships that are significant at the 0.003 level.

Table 3
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Table 3. *Hourly Wage and Wage Augmentation Comparisons Between Direct Support Professionals (DSPs) and Frontline Supervisors (FLSs)*

Continuous Variables					
Variable		DSPs		FLSs	*p*-value
Hourly Wage Pre-pandemic (average)		$14.18		$18.10	**<0.001**
Hourly Wage Currently (average)		$14.60		$18.86	**<0.001**
Categorical Variables					
Receiving a Wage Augmentation		N	%	N	%	*p*-value
	Yes	1,064	27.0[a]	234	26.0 [a]	0.515
	No	2,867	73.0 [a]	666	74.0 [a]	
	Total	3,931	100.0	900	100.0	
Amount of COVID-19 Wage Augmentation		N	%	N	%	*p*-value
$0.01 to $1.00 per hour		175	18.0 [a]	20	9.0[b]	**0.001**
$1.01 to $2.00 per hour		262	27.0 [a]	59	27.0 [a]	
$2.01 to $3.00 per hour		221	22.0 [a]	74	33.0 [b]	
$3.01 to $4.00 per hour		50	5.0 [a]	6	3.0 [a]	
More than $4.01 per hour		41	4.0 [a]	10	4.0 [a]	
Received a lump sum bonus		234	24.0 [a]	54	24.0 [a]	
Total		983	100.0	223	100.0	

Note. Subscript letters [a] and [a] in a row indicate column proportions do not differ significantly at the 0.05 level. Subscript letters [a] and [b] in a row indicate column proportions differ significantly at the 0.05 level. *P*-values in bold represent relationships that are significant at the 0.003 level.

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Table 4. *Quality of work life since the beginning of the pandemic comparison between Direct Support Professionals (DSPs) and Frontline Supervisors (FLSs)*

Quality of work life since beginning of the COVID-19 pandemic	DSPs		FLSs		*p*-value
	N	%	N	%	
Much better	257	7.0[a]	45	5.0 [a]	**<0.001**
Better	732	19.0 [a]	137	16.0[b]	
The same	1,603	42.0 [a]	297	35.0 [b]	
Worse	938	24.0 [a]	264	31.0 [b]	
Much worse	302	8.0 [a]	107	13.0 [b]	
Total	3,832	100.0	850	100.0	

Note. Subscript letters [a] and [a] in a row indicate column proportions do not differ significantly at the 0.05 level. Subscript letters [a] and [b] in a row indicate column proportions differ significantly at the 0.05 level. *P*-values in bold represent relationships that are significant at the 0.003 level.