A Retrospective Analysis of Pay Strategies on Staffing Metrics in a Human-Service Organization

By

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Abstract

The COVID-19 pandemic, combined with other environmental variables, has caused a staffing crisis across the U.S. workforce. Companies attempt to increase employee compensation to keep personnel from leaving thereby contributing to the labor shortage. Human-service settings that employ Direct Support Professionals face these challenges, which are exacerbated by the stressful conditions characteristic of working in human-service settings. One approach to address this issue is to adopt various pay strategies used by other industries (e.g., nursing). This retrospective analysis attempted to identify the effects of various pay strategies on several staffing metrics provided by a human-service organization. Findings reveal improvements in average hourly wage with simultaneous reductions in overtime hours, stable average hours worked at approximately 37 hrs/week across pay strategies, and a general increase in missed shifts. Although no definitive conclusions can be drawn about the effects of the pay strategies, several beneficial outcomes are identified and discussed.

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A Retrospective Analysis of Pay Strategies on Staffing Metrics in a Human-Service Organization

The global pandemic of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) had devastating effects on organizations and individual's lives, both personally and professionally. According to a Pew Research poll, 89% of Americans identified at least one negative change in their lives due to the pandemic and one-third of Americans reported the pandemic limited the activities in which they could engage or how they used their free time (Van Kessel et al., 2021). Contracting the virus caused illness that ranged in severity, which led to mandated quarantines, physical side effects, and sometimes death (Centers for Disease Control and Prevention [CDC], 2022). The CDC and the United States Government implemented numerous measures to reduce the spread of SARS-CoV-2, including strict stay-at-home guidelines (Moreland et al., 2020). Mandates that required citizens to stay at home led to entire workforces transitioning to working from home. Doing so was not possible for every industry (e.g., retail, food service); thus, many organizations were forced to lay off employees (Ansell & Mullins, 2021). Of those employees who retained employment, nearly 50% voluntarily quit their jobs to ensure their own safety or to help take care of family members or dependents (Parker & Horowitz, 2022).

Nearly one year after the start of the pandemic, 19 million Americans filed for some form of jobless benefits, the majority of which were specific to pandemic-relief assistance (Hetrick et al., 2021). As a result, many small businesses permanently closed, while larger businesses operated with far fewer employees (Bartik et al., 2020). To address the workforce shortage, businesses limited the services offered, reduced their hours of operation, and offered numerous sign-on incentives to attract applicants (Russ, 2022; Todd-Ryan, 2021).

Unfortunately, the workforce shortage remains in effect nearly three years after the pandemic started. Statistics reveal that women and retirees comprised a large proportion of individuals leaving the workforce (Hetrick et al., 2021). Between February 2020 to February 2021, approximately 2.4 million women left the workforce (Silva & Miranda, 2021). In contrast, only 1.8 million men left the workforce during this same period. In addition to the rising need to take care of family members, the industries that most employed women (e.g., food service, retail, tourism) were directly affected by the pandemic (Hetrick et al., 2021). These industries were the first to close and, in many cases, stayed closed longer than other industries that were deemed more essential (Bartik et al., 2020). In addition, the number of "baby boomers" (born between 1946 and 1964) who retired increased dramatically during the pandemic (3 million per year compared to 2 million per year before the pandemic; Fry, 2020). The massive departures were further compounded by a 50-year reduction in the fertility rate. That is, on average women are having fewer than two children, which leads to an inability to replace previous generations (Hamilton, 2020) and, thus, there are fewer eligible adults to enter the workforce. As a result, the United States is facing a workforce deficit of 6 million people in the coming years (Binvel et al., 2018).

Staffing Issues in Human-Service Settings

A lack of population replacement and the exodus of women and older workers from the labor pool have produced staffing shortages across industries, including settings serving individuals with intellectual and developmental disabilities (IDD). Service providers of individuals with IDD—often referred to as a Direct Support Professional (DSP)—total approximately 1.3 million in the United States (President's Committee, 2017). They currently provide services to nearly 1.8 million persons with IDD, though this need will continue to increase, as about 473,000 people now sit on waitlists for services (Diament, 2020), and over 871,000 more people are currently being cared for by family members over the age of 60 (Braddock et al., 2017).

Organizations that provide services to persons with IDD rely on DSPs to provide such services. Under pre-pandemic working conditions, DSPs regularly reported high stress and burnout year after year (Panicker & Ramesh, 2018; Patton et al., 2016; Rose, 2011). The responsibility of DSPs to deliver quality services is made even more difficult when combined with the pandemic and socioeconomic factors affecting the available labor force (Alexander et al., 2020). DSP stress, burnout, and environmental factors have led to human-service organizations struggling with staffing issues such as tardiness, absenteeism, and turnover for years (Riley & Frederiksen, 1984).

Tardiness

According to a 2019 study of 1.2 million global work shifts, approximately 6% of all hourly employees are late to work (Moody & Bolden-Barrett, 2019). Even relatively low tardiness can have a detrimental effect on productivity of the entire workforce, as employees are waiting for one another to commence work tasks or meetings or may be distracted by the flurry of work that follows a late arrival (Belcher, 2016). Additionally, the financial cost of tardiness to an organization extends far beyond the hourly wage of an employee. Costs such as office space, employee benefits, overhead costs, and consumable materials are in place even when an employee is late (Peters-Atkinson, 2012). Researchers have successfully addressed tardiness using interventions informed by performance diagnostics (e.g., Fienup et al., 2013; Merritt et al., 2019). Despite these outcomes, tardiness persists across the national workforce.

Absenteeism

An additional challenge facing organizations is employee absenteeism, which is failure to report to a scheduled shift (Durand, 1985). Involuntary absenteeism is most problematic and refers to events, such as sickness or family emergencies, for which the employee must miss their scheduled shift. Involuntary absenteeism is challenging because of the inability to predict the absence and coordinate a solution with employers or fellow employees (Camden & Ludwig, 2013). Absenteeism can cost organizations billions of dollars each year (Rhodes & Steers, 1990, Stinson 2015), and can lead to more stress for other employees or managers as they are forced to cover shifts. This unpredictable extra workload is one of the many contributing factors of turnover.

Group contingencies (Reid et al., 1978) and posted brochures and lottery systems (Luiselli et al. 2009) have effectively reduced absenteeism, but additional research is needed across industries to fully address this issue.

Turnover

Aside from tardiness and absenteeism, turnover has plagued human-service settings for years (Hewitt & Larson, 2007; Larson & Lakin 1992, 1999; Strouse et al., 2004). The regular loss of employees costs organizations time and money in training and hiring, while negatively impacting those persons in need of service (Sulek et al., 2017). Before the COVID-19 pandemic in 2020, annual DSP turnover rates were 43.6% (National Core Indicators, 2022), as compared to the 3% average turnover rate of all workforces (Bureau of Labor Statistics, 2020). A 2015 study of behavioral technicians found that the level of satisfaction with supervision, training, and pay predicted the intent of the respondent to leave their organization (Kazemi et al., 2015). Strouse and colleagues developed a scheduling system which drastically reduced turnover rates within an organization while simultaneously increasing the average hourly salary (Strouse et al., 2004).

Despite these beneficial effects, there are few empirical or experimental studies that address turnover in human-service settings.

Pay Scales

In addition to the creative organizational changes listed thus far, variations in pay strategy can be implemented to combat staffing issues within an organization. For example, traveling nurses are given extra pay during times of crisis (i.e., during the pandemic or seasonal shortages, SEO Growth Partners, 2021) and the Kaiser Permanente Coalition of Unions has called for $25 per hour minimum wages in addition to other tactics to reduce worker burnout across the country (Coalition of Unions, 2022). In Pennsylvania, the DSP staffing shortages have resulted in officials putting in place a $1.2 billion dollar plan that will increase the reimbursement rate to a level that would allow providers to pay $15 an hour on average—an increase from the $13 average present now (Deppen & Rihl, 2021).

Hewitt et al. (2020, 2021) polled personnel in human-service settings across the country at the start of the pandemic and 6 and 12 months later. These polls showed that nearly half of individuals in this setting had assumed additional work responsibilities, and roughly one-third of employees were working more hours each week. Their data also showed that over 66% of employees working in these positions had worked for their respective organization for more than three years. While many organizations increase wages to foster employee tenure, the largest percentage of those polled (43%) reported wage increases of less than $2.00 per hour, despite being identified as essential personnel (Hewitt et al., 2021).

Pay scale strategies and staff scheduling strategies can be combined to have a positive effect on workforce issues and overall organizational performance. For example, Strouse and DiGennaro Reed (2022) described a series of pay scale changes and staff scheduling strategies that produced positive outcomes for the organization. By modifying the traditional 40-hour work week to a 36-hour half week and scheduling employees to work either the front half or back half of the week, the authors reduced the number of missed shifts. In addition, increased pay was given for work shifts scheduled during weekend hours, which reduced unplanned overtime costs while simultaneously increasing the average hourly wage of employees (Strouse & DiGennaro Reed, 2022).

Purpose of Study

Despite research documenting effective strategies to target DSP tardiness, absenteeism, and turnover, human-service organizations continue to grapple with these issues (Wine et al., 2020) indicating the field would benefit from additional research and real-world applications of innovative solutions to combat these challenges. Thus, the purpose of the present paper is to describe the results of a retrospective analysis of various pay strategies adopted during the COVID-19 pandemic by a human-service organization, GoodLife Innovations, with an established history of introducing solutions to target these very issues (Strouse et al., 2013; Strouse & DiGennaro Reed, 2022).

Method

Setting and Participants

GoodLife Innovations (hereafter, GoodLife) is a 501(c)(3) organization that provides residential, day, and educational services to children and adults with IDD. GoodLife's mission is to "make a meaningful difference in the everyday lives of seniors, individuals with disabilities, and those who support them by transforming lives through deep relationships, learning, respect, innovation, exceeding expectations and achieving results," (Get to Know GoodLife, 2022). The agency started in 1977 under the name Community Living Opportunities, Inc., and has provided services for 45 years. Residential services are provided to approximately 247 residents across four counties in Kansas, including Allen, Douglas, Johnson, and Sedgwick counties. Four day-services programs provide support for adults with IDD during daytime hours. GoodLife also offers educational services in an inclusive preschool program at the Northstar Child Development Center.

The participants of this study were full-time DSPs working at GoodLife. To be considered a full-time DSP, a participant must have been hired to work 30 hours or more per week. DSPs must meet a minimum number of requirements to be hired. An applicant must be at least 18 years of age, pass a criminal background check, clear a tuberculosis screening, and attest to their ability to lift small loads. Once an applicant is hired, they complete online and in-person preservice training for approximately five days. After pre-service training is complete, DSPs complete on-the-job training for 16-20 hours in the program where they will work. Due to the nature of this retrospective analysis, demographic information is not available. The number of participants meeting these criteria varied throughout data collection given turnover and agency growth but averaged 207 DSPs (M = 207.45), as depicted in Table 1.

Materials

Upon completion of the hiring process, employees are enrolled into Paycor, the payroll software used by GoodLife. According to their website, Paycor is a payroll software that "collects employee hours worked data (for hourly workers) and salary data for full-time employees and consolidates it into an easy-to-read grid for payroll administrators to run on a regular basis" (Paycor, Inc., 2022). It does so using a mobile app in which employees or their supervisors can log their individual hours. By using this system across all employees, the Human

Resources personnel, as well as the executive team at GoodLife, can monitor various metrics across the company. The data provided by Paycor were used for this retrospective analysis.

Independent Variable

Since 2020, GoodLife has modified hourly pay scales to maintain current and new employees during the COVID-19 pandemic and national labor shortage. Table 2 summarizes when various pay scale changes were made. The parameters of these pay changes were dictated by the operational funding available to the organization, which did not change significantly during the pandemic.

While most pay changes were simple increases and decreases to the hourly wage, some were more complex. The first major change was a program called Premium Pay. Premium Pay was targeted specifically at those employees who work during the last 48 hours of their work week, or Saturday and Sunday. Any hours worked during these days were paid at a rate of 1.5 times their regular hourly wage. The goal of this program was to incentivize employees working these days and minimize overtime costs to the company.

When a shift goes unfilled, managers and other DSPs are asked to provide support to the program by covering the shift, which could result in overtime costs. Overtime is a federally mandated requirement to pay any full-time employee 1.5 times their salary when they work more than 40 hours in a week (U.S. Department of Labor, 2022). Too many overtime shifts could financially burden an organization. By paying employees premium pay, GoodLife hoped to decrease instances in which overtime was required, which had been determined to be most commonly due to unfilled weekend shifts.

The last program implemented in the analyzed period was Enhanced Pay. Enhanced pay is a $.50 per hour increase to all hours worked for those employees that worked more than their scheduled 36 hours in a week. For example, if an employee working 36 hours at $13/hr worked an extra 8-hour shift, they would be paid $13.50/hr for 44 hours that week.

Dependent Measures and Data Analysis

Researchers and GoodLife agreed on six measures that would be most pertinent to analyzing the effects of the pay scale changes. These metrics include average hourly wage, total number of hours worked by each DSP, percentage of DSPs by number of hours worked, the total number of overtime hours paid, the total number of unfilled shifts, and the total number of hours worked across the organization.

Average hourly wage was calculated by summing the hourly wage for every full-time DSP during the time sampled divided by the number of full-time DSPs. I also summarized the total number of hours worked by each DSP for each week sampled. Then, I calculated the average number of hours worked by summing the total number of hours worked for each DSP during the time sampled, then dividing by the number of full-time DSPs who worked during that time. I used these data to conduct a separate analysis summarizing the percentage of full-time DSPs working their allotted hours. This analysis could help determine if the incentive programs of enhanced and premium pay were encouraging DSPs to work more than their position's minimum requirement. First, all DSPs were aggregated by how many hours they worked: those that worked 36 hours (the minimum required for the position), those that worked between 36 and 48 hours, and those that worked more than 48 hours. The total number of DSPs that worked in each of these categories was then divided by the total number of DSPs and multiplied by 100, giving three percentages.

All unfilled shifts that were reported during each sampled week were totaled to determine the effect these changes had on minimizing impacts to the continued care provided by the organization to its clients. In addition, overtime percentages were calculated by dividing the number of overtime hours paid by the number of all hours paid and multiplying by 100. This calculation was done to determine if these pay programs and pay scale changes were effective in eliminating overtime costs for the organization. Lastly, all hours worked by DSPs were summed and graphed.

Design and Procedure

I conducted a retrospective analysis of the above-described organizational metrics across approximately two years: September 2020 to June 2022. Once the dates of all pay change implementations were determined, data were sampled from a one-week period at the time of, and six weeks following each change to assess the effect of the pay change on the metric measured. All data for this study were provided by GoodLife's executive team, exported as Excel spreadsheets from Paycor. These data were then filtered to isolate full-time DSPs and cleaned and aggregated for graphical display.

Because the data were exported from existing software, interobserver agreement data were not collected. In addition, procedural integrity data were not measured given the retrospective nature of the analysis.

Results

Figure 1 summarizes the average hourly wage of DSPs during weeks sampled from September 2020 to June 2022. These data reveal that the average hourly wage increased during this time. At the end of 2020, the average hourly wage was \$14.94, which increased to \$17.22 by June 2022 (M = \$15.14; range, \$13.98–\$17.22).

Figure 2 depicts the total number of hours that every full-time DSP worked in the selected work week across the organization. The number of DSPs varied per sampled week due to natural turnover in the organization (see Table 2). The total hours worked ranged from 0 to 92 across all samples. The average of each sampled week ranges from 33.84 to 38.16 (M = 36.65, SD = 1.13), showing little variability across the two-year timeframe.

Figure 3 depicts the percentage of DSPs who worked less than 36 hours, between 36 and 48 hours, and more than 48 hours in the weeks sampled. A slight increasing trend is shown in the percentage of DSPs who worked between 36 and 48 hours (M = 45.88%; range, 37.89%–54.04%). The percentage of DSPs who worked less than 36 hours decreased slightly (M = 28.4%; range, 21.33%–39.75%). The percentage of DSPs who worked more than 48 hours was stable across the weeks sampled (M = 25.72%; range, 20.44%–28.67%).

Figure 4 summarizes the percentage of all hours worked paid as overtime hours. The results show a steady decreasing trend (M = 2.42%; range, 1.25%–3.92%). Figure 5 displays the total number of unfilled shifts across the organization during the sampled weeks. The results reveal an increasing trend in the number of unfilled shifts across this period (M = 81.25; range, 44–97).

Figure 6 depicts the total number of hours worked across all DSPs in the organization during each of the sampled weeks. Overall, this number decreased from 8,650 hours in September 2020 to 6,699 hours in June 2022 (M = 7,446.64; range, 5,954.73–9,120.25).

Discussion

The present retrospective study analyzed the effects of various pay scale changes on several employee metrics across a two-year span. The results suggest that both enhanced and premium pay programs increased average hourly wages earned by full-time DSPs, without increasing the average hours worked. In addition, the total number of hours worked by DSPs across the organization decreased and more than 50% of DSPS worked between 36 and 48 hours each week. The total percentage of overtime wages decreased for the organization, but the number of missed shifts increased during the period analyzed.

I was unable to locate behavioral research that focused on the effects of pay strategies on employee metrics. Most studies used rewards, such as gift cards or time off to reinforce work behavior (Wine et al., 2012), or used points-based systems or token economies (Vergason & Gravina, 2019; Newcomb, 2019). In addition, current published research presents data for a brief period (not years) and lacks institutionalization of the initiative (i.e., the organization did not adopt the initiative after the researcher finished the project). The current analysis spanned years, summarized the results of systemic changes to pay strategies, and relied on agency leadership to implement the pay changes. Thus, this study contributes to the limited research on pay strategies.

One impressive finding is that the average hours worked did not change in the weeks sampled, while the average hourly wage increased. Moreover, approximately 70% of full-time DSPs worked less than 48 hours, which is impressive given the ongoing pandemic and staffing crisis. Nationally, 55% of DSPs nationwide work at least one extra hour per week than before the pandemic, while 15% work an additional 31 or more hours per week (Hewitt et al., 2020), and most indicate less than a $2/hr increase in pay. The current data reveal that in relation to DSPs nationwide, DSPs at GoodLife are working fewer extra hours and earning a higher salary. In addition to average hours worked remaining consistent across the period analyzed, the range (i.e., variability) was large and consistent. This wide variability could be the result of traded shifts, or individual instances of sickness or holiday, which may appear worse given that a single week was measured.

Funding for human-service organizations is multifaceted and ever changing based on current social and political climates (Jaramillo et al., 2019). Thus, identifying ways to wisely use limited financial resources to produce maximally beneficial outcomes is worthwhile. One notable finding of this study was a decrease in overtime hours paid. This outcome is beneficial to the funding of the organization, as the premium and enhanced pay strategies cost less to the organization than paying the mandatory 1.5 times hourly wage for every hour worked more than 40 hours. Moreover, overtime increases burnout and turnover (Olson, 2021), which suggests that identifying ways to reduce overtime is a socially valid outcome. The pay strategies described in this study may be one viable option for agencies to pursue.

Despite these positive effects, the number of unfilled shifts remained an issue for the organization. This outcome is likely due to the consequences of the COVID-19 pandemic and the national staffing shortage, issues that could only worsen over time. The pay scale changes implemented in this study did not seem to have a positive effect on reversing these shortcomings. Moreover, given that the total hours worked remained consistent while the hours DSPs worked decreased over time, the findings suggest that management staff likely covered unfilled shifts. This potential outcome might produce burnout for management staff resulting in turnover. At the very least, if managers are covering unfilled shifts, they are unable to complete other job duties, such as training and supporting DSPs, which could lead to further DSP turnover (Kazemi et al., 2015).

Future studies could rely on behavioral economic approaches to determining pay strategies. Specifically, examining demand for various pay strategies similar to the approach adopted by Henley et al. (2016) could help organizations better identify pay scales that would reduce turnover and motivate employees to come to work. For example, Henley et al. used a behavioral economic approach to determine the percentage of employees that would perform a hypothetical work task, for how long, and for how much compensation. In this way, they could identify the point at which the workforce (i.e., percentage of employees) would no longer work for the hypothetical incentive. Future research could use this approach to influence the pay strategy adopted, which could be introduced in a manner that would permit an experimental analysis (rather than retrospective analysis) of various employee metrics.

Kazemi et al. (2015) documented that behavior technicians deemed satisfaction with pay an important variable in influencing their intent to quit their job, which predicts actual quitting. While specifics on employee turnover, absenteeism, and tardiness were not available for analysis in this study, the consistent average number of hours worked could imply satisfaction with pay. Future work could combine the surveys used in Kazemi et al. with the pay adjustments analyzed in the present study to determine an effect on intent to quit.

Limitations and Future Directions

This retrospective analysis includes several limitations worth noting. First, while pay scale changes were highlighted and analyzed, the retrospective nature of this study did not allow control for other environmental factors that could have impacted the data. This limitation leads to a lack of causal relations between the data and the pay changes. Future studies could attempt to isolate the pay scale changes and implement them in real time across various settings to produce causal rather than correlational conclusions.

A second limitation involved analyzing data from a one-week period during each pay strategy change. Numerous variables could explain the variation in some of the data, such as employees taking vacations, trading shifts, or any other sort of appointments or engagements that could have prevented them from working during that one week. Future research may try to vary the lengths of time (e.g., two weeks, one month) to determine the most valid measurement period.

Third, the study lacked any form of inter-observer agreement (IOA) data. Although direct observations were not part of the study, the data could contain errors. For example, employees input hours worked into Paycor, which could allow for inaccurate reporting. Moreover, due to the retrospective nature of the present analysis, I did not collect procedural integrity on the various pay scale changes. Although these limitations could be addressed in future research, it may be difficult to collect IOA data on several measures given the reliance on payroll software.

As previously mentioned, turnover, absenteeism, and tardiness are some of the largest issues facing human-service organizations. This study did not use a metric for analyzing if and how the pay scale changes affected these topics within the organization. Future studies could record employee arrival and departure times, tenure, or how many people enter or exit the organization during and after pay scale changes. These measures would allow for a better analysis of any relation between these common issues and pay initiatives.

This study did not measure social validity, which is a limitation. Social validity data could help organizational leaders understand how pay scale changes affected individual employees. While the organization strived to compensate employees fairly with what funding was available, asking employees their opinions on these pay initiatives could help determine their effect on individual decisions and workplace behavior.

Despite these limitations, this analysis helped to elucidate potential effects pay scale changes could have on employee metrics in an organization. Ongoing analysis of pay programs and their effects on employees is crucial to learning how to counter the modern staffing crisis. With women still not returning to the workforce, older workers retiring at record-breaking rates, and COVID-19 still a concern, human-service settings need helpful guidance for how to tackle these complex issues. These findings could help organizations craft a solution to retain DSPs, and continue to provide quality, reliable care to those individuals who need it.

References

Alexander, R., Ravi, A., Barclay, H., Sawhney, I., Chester, V., Malcolm, V., Brolly, K., Mukherji, K., Zia, A., Tharian, R., Howell, A., Lane, T., Cooper, V., & Langdon, P. E. (2020). Guidance for the Treatment and Management of COVID-19 Among People with Intellectual Disabilities. *Journal of Policy and Practice in Intellectual Disabilities*, *17*(3), 256–269. https://doi.org/10.1111/jppi.12352

Ansell, R., & Mullins, J. P. (2021, June 15). *COVID-19 ends longest employment recovery and expansion in CES history, causing unprecedented job losses in 2020 : Monthly Labor Review: U.S. Bureau of Labor Statistics*. https://www.bls.gov/opub/mlr/2021/article/covid-19-ends-longest-employment-expansion-in-ces-history.htm

Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E. L., Luca, M., & Stanton, C. (2020). The impact of COVID-19 on small business outcomes and expectations. *Proceedings of the National Academy of Sciences*, *117*(30), 17656–17666. https://doi.org/10.1073/pnas.2006991117

Belcher, L. M. (2016, October 26). *The Effect of Tardiness on Businesses*. Small Business - Chron.com. https://smallbusiness.chron.com/effect-tardiness-businesses-19150.html

Binvel, Y., Franzino, M., Guarino, A., Laouchez, J.-M., & Penk, W. (2018, July 26). *The $8.5 Trillion Talent Shortage*. https://www.kornferry.com/content/dam/kornferry/docs/article-migration/FOWTalentCrunchFinal_Spring2018.pdf

Braddock, D. L., Hemp, R. E., Tanis, E. S., Wu, J., & Haffer, A. L. (2017). *State of the States in Intellectual and Developmental Disabilities, 11th edition* (11th ed.). American Association on Intellectual and Developmental Disabilities.

Bureau of Labor Statistics. (2020, February 11). *Job Openings and Labor Turnover Survey News Release* [Press release]. https://www.bls.gov/news.release/archives/jolts_02112020.htm

Camden, M. C., & Ludwig, T. D. (2013). Absenteeism in Health Care: Using Interlocking Behavioral Contingency Feedback to Increase Attendance With Certified Nursing Assistants. *Journal of Organizational Behavior Management*, *33*(3), 165–184. https://doi.org/10.1080/01608061.2013.814521

Centers for Disease Control and Prevention. (2022, October 26). *COVID-19 and Your Health*. https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html

Coalition of Unions. (2022). LMP at 25 years: addressing a worker staffing crisis. In *Union Coalition*. https://www.unioncoalition.org/wp-content/uploads/2022/08/LMP25.pdf

Deppen, C., & Rihl, J. (2021, December 21). *Low pay is causing a staffing crisis for disability care. Advocates say Pa.'s plan to raise wages isn't enough*. WHYY. https://whyy.org/articles/low-pay-is-causing-a-staffing-crisis-for-disability-care-advocates-say-pa-s-plan-to-raise-wages-isnt-enough/

Diament, M. (2021, March 19). *Nationally, Waiting Lists For Waiver Services Growing*. Disability Scoop. https://www.disabilityscoop.com/2020/02/07/nationally-waiting-lists-waiver-services-growing/27783/

Durand, V. M. (1985). Employee Absenteeism. *Journal of Organizational Behavior Management*, *7*(1–2), 135–168. https://doi.org/10.1300/j075v07n01_09

Fienup, D. M., Luiselli, J. K., Joy, M., Smyth, D., & Stein, R. (2013). Functional Assessment and Intervention for Organizational Behavior Change: Improving the Timeliness of Staff Meetings at a Human Services Organization. *Journal of Organizational Behavior Management*, *33*(4), 252–264. https://doi.org/10.1080/01608061.2013.843435

Fry, R. (2020, November 10). *The pace of Boomer retirements has accelerated in the past year*. Pew Research Center. https://www.pewresearch.org/fact-tank/2020/11/09/the-pace-of-boomer-retirements-has-accelerated-in-the-past-year/

Get To Know GoodLife. (2022, October 14). GoodLife Innovations. https://mygoodlife.org/get-to-know-goodlife/

Hamilton, B. E. (2020, January 9). *QuickStats: Expected Number of Births over a Woman's Lifetime* . . . Centers for Disease Control and Prevention. https://www.cdc.gov/mmwr/volumes/69/wr/mm6901a5.htm

Henley, A. J., DiGennaro Reed, F. D., Kaplan, B. A., & Reed, D. D. (2016). Quantifying efficacy of workplace reinforcers: An application of behavioral economic demand to evaluate hypothetical work performance. *Translational Issues in Psychological Science*, *2*(2), 174–183. https://doi.org/10.1037/tps0000068

Hetrick, R., Grieser, H., Sentz, R., Coffey, C., & Burrow, G. (2021). The Demographic Drought: how the approaching sansdemic will transform the labor market for the rest of our lives. In *Lightcast*. Emsi. https://lightcast.io/research/demographic-drought

Hewitt, A., & Larson, S. (2007). The direct support workforce in community supports to individuals with developmental disabilities: Issues, implications, and promising pactices. *Mental Retardation and Developmental Disabilities Research Reviews*, *13*(2), 178–187. https://doi.org/10.1002/mrdd.20151

Hewitt, A., Pettingell, S., Bershadsky, J., Smith, J., Kleist, B., Sanders, M., & Kramme, J. (2021). Direct support workforce and COVID-19 national report: 12-Month follow-up. In *ICI*. Institute on Community Integration and National Alliance for Direct Support

Professionals. https://publications.ici.umn.edu/community-living/covid19-survey-12-month-followup/main

Hewitt, A., Pettingell, S., Kramme, J., Smith, J., Dean, K., & Kleist, B. (2020). The Direct Support Workforce and COVID-19 National Survey Report 2020. In *ICI*. Institute on Community Integration and National Alliance for Direct Support Professionals. https://publications.ici.umn.edu/community-living/covid19-survey/overview

Hewitt, A., Pettingell, S., Kramme, J., Smith, J., Dean, K., Kleist, B., Sanders, M., & Bershadsky, J. (2021). Direct Support Workforce and COVID-19 National Report: Six-Month Follow-up. In *ICI*. Institute on Community Integration and National Alliance for Direct Support Professionals. https://publications.ici.umn.edu/community-living/covid19-survey-6-month-followup/main

Jaramillo, E. T., Willging, C. E., Green, A. E., Gunderson, L. M., Fettes, D. L., & Aarons, G. A. (2018). "Creative Financing": Funding Evidence-Based Interventions in Human Service Systems. *The Journal of Behavioral Health Services &Amp; Research*, *46*(3), 366–383. https://doi.org/10.1007/s11414-018-9644-5

Kazemi, E., Shapiro, M., & Kavner, A. (2015). Predictors of intention to turnover in behavior technicians working with individuals with autism spectrum disorder. *Research in Autism Spectrum Disorders*, *17*, 106–115. https://doi.org/10.1016/j.rasd.2015.06.012

Luiselli, J. K., DiGennaro Reed, F. D., Christian, W. P., Markowski, A., Rue, H. C., St. Amand, C., & Ryan, C. J. (2008). Effects of an Informational Brochure, Lottery-Based Financial Incentive, and Public Posting on Absenteeism of Direct-Care Human Services Employees. *Behavior Modification*, *33*(2), 175–181. https://doi.org/10.1177/0145445508320624

Merritt, T. A., DiGennaro Reed, F. D., & Martinez, C. E. (2019). Using the Performance Diagnostic Checklist–Human Services to identify an indicated intervention to decrease employee tardiness. *Journal of Applied Behavior Analysis*. https://doi.org/10.1002/jaba.643

Moody, K., & Bolden-Barrett, V. (2019, May 24). *On average, 6% of hourly workers are late to work, study finds*. HR Dive. https://www.hrdive.com/news/on-average-6-of-hourly-workers-are-late-to-work-study-finds/555412/

Moreland, A., Herlihy, C., Tynan, M. A., Sunshine, G., McCord, R. F., Hilton, C., Poovey, J., Werner, A. K., Jones, C. D., Fulmer, E. B., Gundlapalli, A. V., Strosnider, H., Potvien, A., García, M. C., Honeycutt, S., Baldwin, G., Clodfelter, C., Howard-Williams, M., Jeong, G., . . . Popoola, A. (2020). Timing of State and Territorial COVID-19 Stay-at-Home Orders and Changes in Population Movement — United States, March 1–May 31, 2020. *MMWR. Morbidity and Mortality Weekly Report*, *69*(35), 1198–1203. https://doi.org/10.15585/mmwr.mm6935a2

National Core Indicators. (2022). National Core Indicators Intellectual and Developmental Disabilities 2020 Staff Stability Survey Report. In *National Core Indicators*. https://legacy.nationalcoreindicators.org/upload/core-indicators/2020StaffStabilitySurveyReport_FINAL.pdf

Newcomb, E. T., Camblin, J. G., Jones, F. D., & Wine, B. (2019). On the Implementation of a Gamified Professional Development System for Direct Care Staff. *Journal of Organizational Behavior Management*, *39*(3–4), 293–307. https://doi.org/10.1080/01608061.2019.1632243

Olson, J. (2021, September 2). *Why Too Much Overtime Is Causing Employee Burnout (and How to Fix It)*. WorkForce Software. https://www.workforcesoftware.com/blog/overtime-employee-burnout-how-to-fix-it/

Panicker, A. S., & Ramesh, S. (2018). Psychological status and coping styles of caregivers of individuals with intellectual disability and psychiatric illness. *Journal of Applied Research in Intellectual Disabilities*, *32*(1), 1–14. https://doi.org/10.1111/jar.12496

Parker, K., & Horowitz, J. M. (2022, March 10). *Majority of workers who quit a job in 2021 cite low pay, no opportunities for advancement, feeling disrespected*. Pew Research Center. https://www.pewresearch.org/fact-tank/2022/03/09/majority-of-workers-who-quit-a-job-in-2021-cite-low-pay-no-opportunities-for-advancement-feeling-disrespected/

Patton, K. A., Ware, R., McPherson, L., Emerson, E., & Lennox, N. (2016). Parent-Related Stress of Male and Female Carers of Adolescents with Intellectual Disabilities and Carers of Children within the General Population: A Cross-Sectional Comparison. *Journal of Applied Research in Intellectual Disabilities*, *31*(1), 51–61. https://doi.org/10.1111/jar.12292

Paycor. (2022). *Online payroll software, reliable and tax compliant*. https://www.paycor.com/hcm-software/payroll-software/

Peters-Atkinson, K. (2012, October 10). The Cost of Employee Tardiness. *Monday Mornings with Madison*. https://mondaymornings.madisoncres.com/the-cost-of-employee-tardiness/

President's Committee for People with Intellectual Disabilities. (2017). *Report to the President 2017: America's direct support workforce crisis: Effects on people with intellectual disabilities, families, communities, and the U.S. economy*.

https://www.acl.gov/sites/default/files/programs/2018-02/2017%20PCPID%20Full%20Report_0.PDF

Reid, D. H., Schuh-Wear, C. L., & Brannon, M. E. (1978). Use of a Group Contingency to Decrease Staff Absenteeism in a State Institution. *Behavior Modification*, *2*(2), 251–266. https://doi.org/10.1177/014544557822006

Rhodes, S. R., & Steers, R. M. (2022). *Managing Employee Absenteeism (ADDISON-WESLEY SERIES ON MANAGING HUMAN RESOURCES)*. Addison-Wesley.

Riley, A. W., & Frederiksen, L. W. (1984a). Organizational Behavior Management in Human Service Settings. *Journal of Organizational Behavior Management*, *5*(3–4), 3–16. https://doi.org/10.1300/j075v05n03_01

Riley, A. W., & Frederiksen, L. W. (1984b). Organizational Behavior Management in Human Service Settings. *Journal of Organizational Behavior Management*, *5*(3–4), 3–16. https://doi.org/10.1300/j075v05n03_01

Rose, J. (2011). How do staff psychological factors influence outcomes for people with developmental and intellectual disability in residential services? *Current Opinion in Psychiatry*, *24*(5), 403–407. https://doi.org/10.1097/yco.0b013e3283476b0b

Russ, H. (2022, August 30). *Restaurants' new normal: fewer cashiers, chefs and wait staff*. Reuters. https://www.reuters.com/business/retail-consumer/restaurants-new-normal-fewer-cashiers-chefs-wait-staff-2022-08-29/

Schoenfelder, T. E., & Hantula, D. A. (2003). A job with a future? Delay discounting, magnitude effects, and domain independence of utility for career decisions. *Journal of Vocational Behavior*, *62*(1), 43–55. https://doi.org/10.1016/s0001-8791(02)00032-5

SEO Growth Partners. (2021, February 16). *Crisis pay and travel nursing: An overview*. Trusted Nurse Staffing. https://www.trustednursestaffing.com/crisis-pay/

Sheryl A. Larson, & K. C. Lakin. (1992). Direct-care staff stability in a national sample of small group homes. *Mental Retardation*, *30*(1), 13–22.

Sheryl A. Larson, & K. C. Lakin. (1999). Longitudinal Study of Recruitment and Retention in Small Community Homes Supporting Persons With Developmental Disabilities. *Mental Retardation*, *37*(4), 267–280. https://doi.org/10.1352/0047-6765(1999)037

Silva, D., & Miranda, L. (2021, February 6). *About 275,000 women left workforce in January in "critical" pandemic trend, experts say*. NBC News. https://www.nbcnews.com/news/us-news/about-275-000-women-left-workforce-january-critical-pandemic-trend-n1256942

Stinson, C. (2015, January 28). *Worker Illness and Injury Costs U.S. Employers >25.8 Billion Annually*. CDC Foundation. https://www.cdcfoundation.org/pr/2015/worker-illness-and-injury-costs-us-employers-225-billion-annually

Strouse, M. C., Carroll-Hernandez, T. A., Sherman, J. A., & Sheldon, J. B. (2004). Turning Over Turnover. *Journal of Organizational Behavior Management*, *23*(2–3), 45–63. https://doi.org/10.1300/j075v23n02_04

Strouse, M. C., & DiGennaro Reed, F. D. (2021). Employee turnover and workforce stability. In *Organizational Behavior Management Approaches for intellectual and developmental disabilities* (pp. 210–234). Routledge.

Strouse, M. C., Sherman, J. A., & Sheldon, J. B. (2013). Do good, take data, get a life, and make a meaningful difference in providing residential services! In *Handbook of crisis intervention and developmental disabilities* (pp. 441–465, 482). Springer Science+Business Media.

Sulek, R., Trembath, D., Paynter, J., Keen, D., & Simpson, K. (2017). Inconsistent staffing and its impact on service delivery in ASD early-intervention. *Research in Developmental Disabilities*, *63*, 18–27. https://doi.org/10.1016/j.ridd.2017.02.007

Todd-Ryan, S. (2021, July 9). *How Covid Affected Employee Perks And What They Will Look Like Post-Pandemic*. Forbes. https://www.forbes.com/sites/samanthatodd/2021/07/09/how-covid-affected-employee-perks-and-what-they-will-look-like-post-pandemic/?sh=6b7ac56e233c

U.S. Department of Labor. (2022). *Overtime Pay*. Wage and Hour Division. https://www.dol.gov/agencies/whd/overtime

Van Kessel, P., Baronavski, C., Scheller, A., & Smith, A. (2021, March 5). *In Their Own Words, Americans Describe the Struggles and Silver Linings of the COVID-19 Pandemic*. Pew Research Center. https://www.pewresearch.org/2021/03/05/in-their-own-words-americans-describe-the-struggles-and-silver-linings-of-the-covid-19-pandemic/

Vergason, C. M., & Gravina, N. E. (2019). Using a guest- and confederate-delivered token economy to increase employee–guest interactions at a zoo. *Journal of Applied Behavior Analysis*. https://doi.org/10.1002/jaba.599

Wine, B., Gilroy, S., & Hantula, D. A. (2012). Temporal (In)Stability of Employee Preferences for Rewards. *Journal of Organizational Behavior Management*, *32*(1), 58–64. https://doi.org/10.1080/01608061.2012.646854

Wine, B., Osborne, M. R., & Newcomb, E. T. (2020). On Turnover in Human Services. *Behavior Analysis in Practice*, *13*(2), 492–501. https://doi.org/10.1007/s40617-019-00399-6

Table 1

Number of DSPs and Mean Hours Worked per Week

Date	Number of Full-Time DSPs	Average Hours Worked	*SD*
28 September 2020	235	36.81	14.63
15 November 2020	239	38.16	15.72
01 February 2021	240	36.89	15.90
21 March 2021	201	38.06	13.91
26 April 2021	202	35.74	15.96
21 June 2021	215	33.84	14.52
01 November 2021	198	37.32	14.10
15 December 2021	240	36.23	13.08
17 January 2022	168	36.59	13.99
01 March 2022	164	36.31	14.14
13 June 2022	180	37.22	13.91
Overall	*M* = 207.45 *SD* = 27.45	*M* = 36.65 *SD* = 1.13	

Table 2

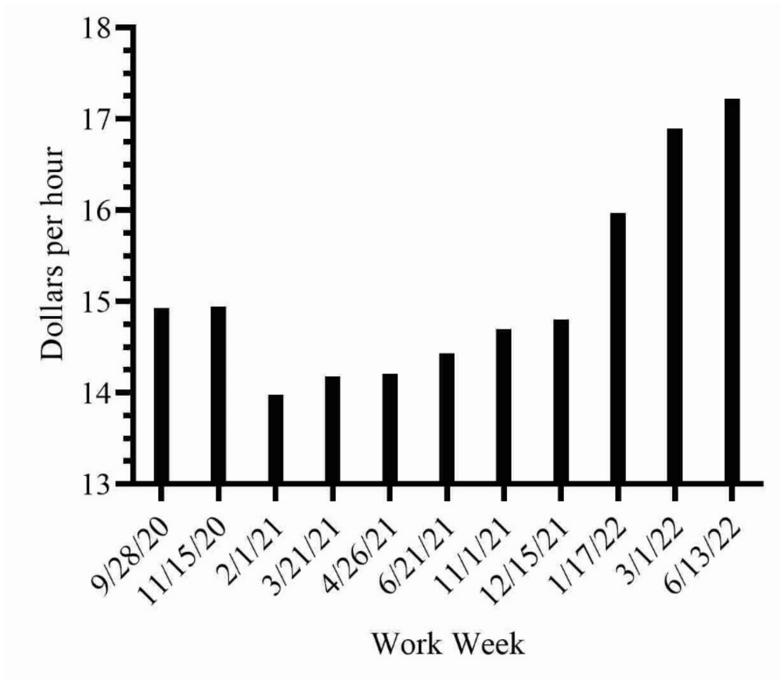
Pay Scale Changes in Dollars Per Hour

Date	From	To	If Full PP	Change
28 September 2020	\$10	\$12	\$14	+ \$2
01 February 2021	\$12	\$11.50	\$13.42	- \$.50
26 April 2021	\$11.50	\$14	\$16.33	+ \$2.50
01 November 2021	\$14	\$13	\$15.17	- \$1
17 January 2022	\$13	\$13	\$15.75	Enhanced Pay

Note: "If Full PP" indicates the hourly wage if an employee worked 36 hours, 12 of which were weekend hours.

Figure 1

Average Hourly Wage Earned by Full-Time DSPs



Note. Average hourly wage included normal overtime pay and premium and enhanced pay.

Figure 2

Hours Worked of Each Full-Time DSP with Means

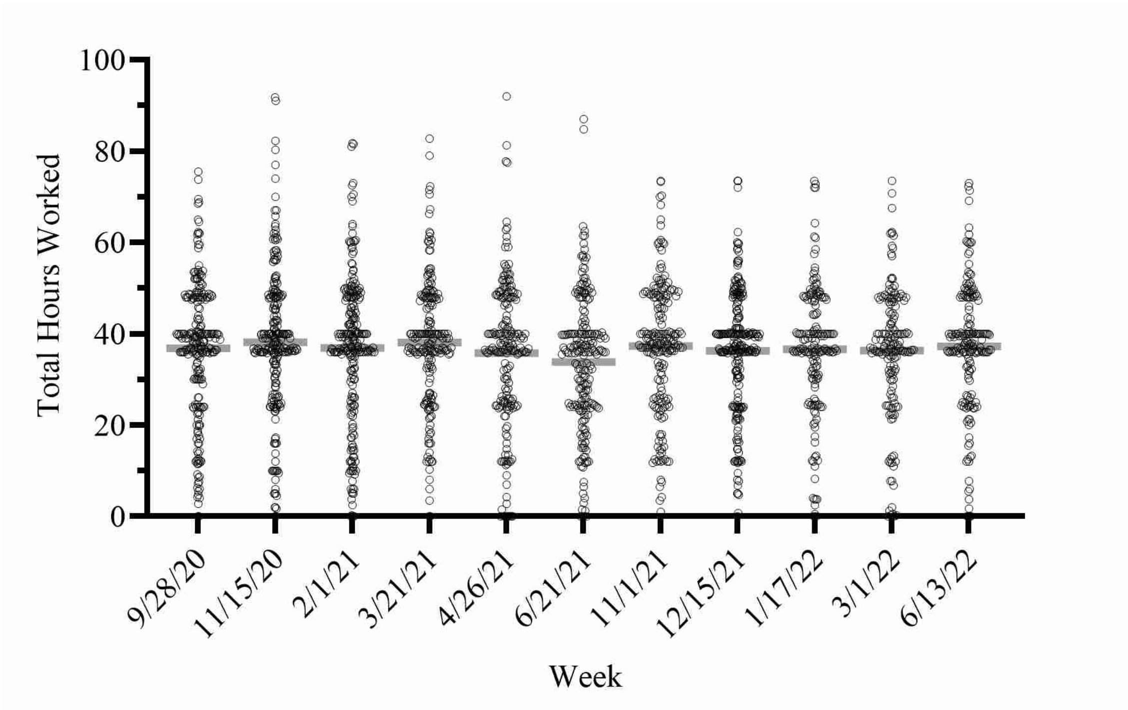


Figure 3

Percentage of Full-Time DSPs by How Many Hours Worked

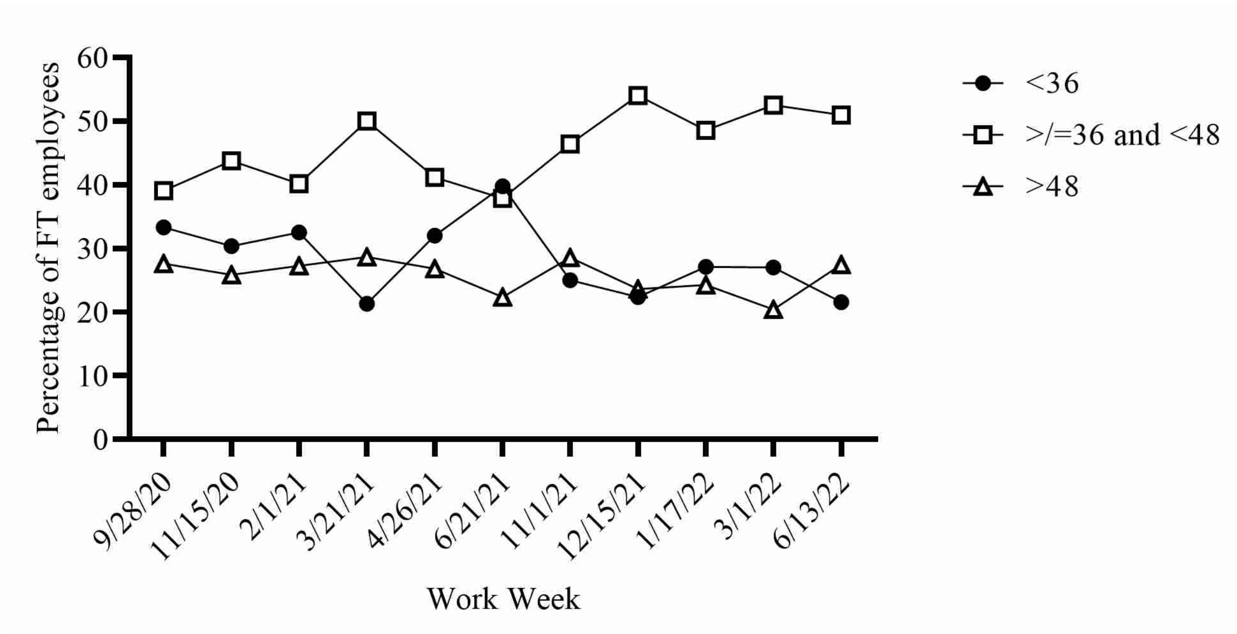
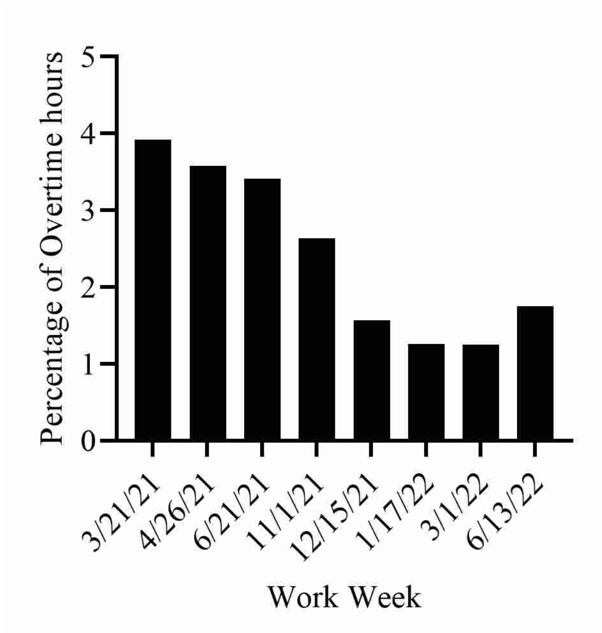


Figure 4

Percentage of Hours Paid by the Organization that were Overtime



Note: Data points do not exist before March 2021 because GoodLife Innovations was using a different payroll software that did not record this metric. GoodLife Innovations began using Paycor on March 1, 2021.

Figure 5

Total Unfilled Shifts Across the Organization

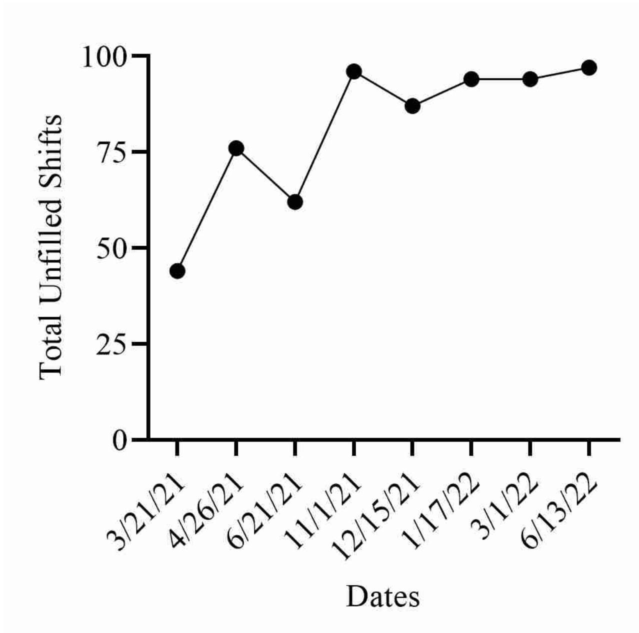


Figure 6

Total Number of Hours Worked by Full-Time DSPs across the Organization