TEAM KENTUCKY

CABINET FOR HEALTH AND FAMILY SERVICES

OFFICE OF DATA ANALYTICS
DIVISION OF ANALYTICS

KENTUCKY CHILD WELFARE WORKFORCE INITIATIVE

Summary Prepared by the Office of Data Analytics Division of Analytics

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What is Known on This Topic?
Child welfare workers (CWWs) report high levels of job stress and dissatisfaction – leading to high rates of turnover. Turnover rates for CWWs are between 15-40% and it costs nearly $54,000 to replace each worker.

What Did this Project Do?
This project was the first to analyze bioindicators of stress in a child welfare workforce. The study found significant evidence of stress in the workforce.

What Could Medicaid Do with These Conclusions?
Medicaid can work to support Kentucky's child welfare workforce so that its beneficiaries receive high quality child welfare services.

Introduction

Child welfare workers (CWWs) perform an incredibly useful and difficult service: strengthening families and keeping children safe. They are often the last line of defense for vulnerable children in abusive situations. It can be useful for all involved to better understand the stresses of their jobs.

Chronic stress is associated with depression, anxiety, cardiovascular disease, musculoskeletal disorders, difficulty sleeping, weight changes, and diabetes to name a few[1–3]. Although workplace stress is potentially unavoidable, it becomes an issue when workers maintain a high level of stress on the job and at home. Not only does chronic stress impact the health of the CWWs, but also the health and welfare of children already in need.

Studies estimate that CWWs average less than two years of employment in their agencies, and turnover rates range between 15% and 40%.[4] It costs child welfare agencies nearly $54,000 for each worker that leaves their position.[5] High turnover rates and a less experienced workforce is challenging for both for their agencies and CWWs.

Prior to this study, data on the topic of CWW stress and workplace satisfaction has exclusively been gathered via self-report surveys. Although self-reports are invaluable as a resource for evaluating workers' mental and physical states, they are unreliable for quantitative analysis. This study is the first of its kind to utilize biofeedback devices to gather data about workplace stress among CWWs.

Project Methods & Results

This study utilized lightweight and nonintrusive heartrate monitors to collect a variety of data. The participants of the study were asked to wear these monitors for 72 consecutive hours (considered the "gold standard" for this type of research) every four weeks between the months May and August 2021. A stress profile of each participant was constructed using their minimum and maximum heart rates, the percentage of each day spent stressed vs relaxed, the number of hours slept each night, the quality of sleep, and each participant's BMI. The quality of sleep is evaluated by the heart rate as well as a value called the root mean square of successive differences between normal heartbeats (RMSSD) – an indicator of overall cardiovascular health.

A small cohort of 32 CWWs were recruited for this study. All but one of the participants were female, 22 were White, 5 Black, 4 multiracial, and 1 Hispanic/Latino. The ages of the participants ranged from 22 to 60 years old, with an average age of 37.8. The average employment tenure employment was 9.06 years, with a minimum of 1 year and maximum of 27. The participants were mostly from rural counties. 15 of the participants were married, 15 unmarried, and 2 divorced. All participants self-reported their health to be fair to excellent.

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During the study, 28 of the participants were working remotely due to the COVID-19 pandemic. COVID-19 posed asymmetric challenges to rural vs urban CWWs as urban workers were more well equipped to work from home. This is an area for future research.

The results from this study indicated that CWWs experience high levels of stress and poor recovery. On average, the participants spent 15.88 hours in elevated stress, or 66.66% of each day; this indicates that they were not entering a state of physiological recovery, even while asleep. Over the course of a 72-hour assessment, the workers were in a state of relaxation only 12.11% of the time, including sleeping hours. Studies show that individuals should not experience more than 40%-60% of stress time in each day. 21 of the 29 participants had days that consisted of over 70% stress time with one participant spending 91.16% of their day in a stressful state.

Although the participants were getting an adequate number of hours of sleep, that sleep was not sufficiently restful. All participants reported issues with waking up in the middle of the night and over half of the participants reported waking up in the middle of the night three or more times each week. Furthermore, the biometric monitors indicated poor sleep quality.

The data were stratified by long- (at least five years) vs short-term employment. Long-term employees demonstrated worse metrics across the board, except for overall sleep time. The largest difference was a worse heart rate variability (measured by RMSSD) among long-term workers during sleep.

While urban employees self-reported higher levels of stress and burnout than their rural counterparts, the biofeedback devices did not indicate significant differences.

"HRV [heart rate variability] measurements indicated that child welfare workers experienced elevated physiological stress for an average of 66.6% of their day. When calculated into hours, the group experienced an average of about 15.87 hours per day of an elevated state of physiological stress across all three of these workdays."

Researchers also offered a mindfulness meditation intervention to study participants to test its effect on measures of stress. Results suggested that the mindfulness sessions were not significantly associated with biometric improvements. Study authors offer an explanation for this phenomenon and urged further study of mindfulness-based interventions for CWWs.

Conclusion

"The main takeaway from this study is the indisputable evidence of prolonged and significant physiological stress associated with working in child welfare."

This study was the first of its kind to combine self-report data with those from biometric devices. Additionally, it was the first of its kind to collect biometric data over a multi-month period. Although the study was limited by its small sample size, these results provide a proof of concept for larger-scale monitoring of employee health in this fashion.

The COVID-19 pandemic began just a few weeks before the planned launch of this program, introducing additional obstacles for the researchers. Because the entirety of these data was collected during the pandemic, it was difficult to ascertain the impact of the pandemic on the workers and to isolate it from the impact of other factors. It is also likely that the pandemic introduced stress to the lives of the CWWs that was both related and unrelated to their work.

The results of this study paint a concerning, yet unsurprising, picture of the experiences of CWWs in Kentucky. This group provides an invaluable resource to some of our most vulnerable citizens. This study demonstrates the necessity for CWWs, their employers, and policymakers to explore ways to reduce the stress associated with child welfare work. Success in that endeavor may lead to decreasing the negative impacts of chronic stress, and consequentially reduce worker turnover and promote a more stable workforce.

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