



Understanding the impact of COVID-19 on stress and Access to Services for Licensed and Kinship Caregivers and Youth in Foster Care

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Abstract

Children in foster care in the United States face unique challenges related to access to health and education services. With the COVID-19 pandemic, many of those services were temporarily disrupted, adding burden to an already strained system. This observational study describes the experiences of licensed and kinship caregivers (N=186) during the peak of COVID-19 stay-at-home orders and as restrictions to services were lifted, to understand the overall impact of COVID-19 on this already vulnerable population. Purposive sampling methods were used, where caregivers known to have received placement of children prior to, during, and following COVID-19 stay-at-home orders were identified and recruited to complete a 45-minute phone-administered survey assessing stress, risks for contracting COVID-19, strain resulting from COVID-19, and access to services for children in foster care in their care across five domains: healthcare, mental health, education, child welfare, and family visitation. Differences by caregiver type (licensed, kinship) and timing in the pandemic were examined. Licensed and kinship caregivers reported similar social and economic impacts of COVID-19, including similar rates of distress for themselves and the youth placed with them. Almost half of caregivers experienced challenges accessing mental health services, with access to services more disrupted during COVID-19 stay-at-home orders. Caregiver reports regarding the social and economic impacts of COVID-19 were similar across the study, suggesting that lessened restrictions have not alleviated strain for this population.

Keywords COVID-19 · Foster care · Kinship care · Child welfare

Approximately 430,000 children reside in foster care (i.e., in the custody of a child protective services agency) in the United States (U.S. Department of Health and Human Services, 2020). Due to maltreatment and other social and contextual factors, children in foster care are at high risk for acute (e.g., infectious diseases) and chronic health conditions (Chernoff et al., 1994; Greiner et al., 2017), have high rates of developmental delay and learning disabilities (Greiner et al., 2021; Jee et al., 2010), and experience frequent school disruptions as they change residences and caregivers (i.e., placement changes; Blome, 1997; White et al.,

2018). The challenges faced by children in foster care were exacerbated by the COVID-19 pandemic, where access to healthcare, education, and behavioral and social services were disrupted (Loria et al., 2021). Public health crises, which involve disruptions to social services, the health sector, and more, like the COVID-19 pandemic, have the potential to disproportionately impact the foster care system. Unfortunately, the lack of research around best practices and policies for addressing disparities has resulted in limited evidence for enacting policies in response to public health crises, placing children in foster care at greater risk for poor outcomes.

As school districts and communities begin enacting policies and allocating resources to respond to public health crises like the pandemic, it is critical to understand where the largest strains for children in foster care and their caregivers remain. Specifically, social service systems need to understand which caregivers and youth in foster care faced the largest barriers and challenges, where those challenges have subsided as health restrictions were lifted and concerns

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regarding COVID-19 declined, and where challenges remain. This is particularly important to consider in the context of two factors within the foster care system. First, in the United States there are systemically created distinctions between caregivers, a term used in this paper to refer to substitute caregivers broadly, who are licensed and those who are kin (Font, 2014) which results in a lack of parity in caring for children in foster care and often exacerbates racial and other social status inequities (Schwartz, 2002). Licensed caregivers, the majority of whom are previously unknown to the children in foster care who are placed with them, complete training and certification requirements and maintain their licensure and qualify for stipends to offset the cost of caring for children placed with them. In contrast, kinship caregivers, who may be biological or fictive kin, are generally known to the children in foster care who are placed with them. Kinship caregivers complete background checks and may qualify for other services, but historically do not receive stipends to offset the cost of caring for children placed with them. Second, children in foster care are already in a stressed system, resulting in the potential for increased impact of public health emergencies. As a result, issues following public health crises, like COVID-19, may persist much longer for households where youth in foster care reside compared to households unaffected by foster care.

To better understand the impact of COVID-19 on children in foster care and their caregivers, this study describes the experiences of licensed and kinship caregivers caring for children in foster care during the COVID-19 pandemic, and how experiences changed over time, spanning the months when shutdowns due to COVID-19 were occurring and through the end of the school year in the spring of 2021. Understanding the experiences of caregivers and their perspective on the impact of service disruptions on the children they care for is important because caregivers bear primary responsibility for ensuring children in foster care have access to healthcare and other services (Greiner et al., 2015; Stone et al., 2006), and caregivers interactions with the children placed with them are known to significantly impact children's behaviors and adjustment while they are in foster care (Dubois-Comtois et al., 2015). It was expected that caregivers would report more concerns about access to services and barriers in supporting children in the spring of 2020, when COVID-19 was emerging, with declines in concerns over time. Additionally, it was hypothesized that because of existing inequities in resources available, kinship caregivers would report more social risks, health risks, and greater strain due to COVID-19, as well as more barriers to services, compared to licensed caregivers. Rates of participation in academic activities and other services are expected to be low following a statewide COVID-19 shutdown on

March 12, 2020, with increased participation following hybrid models and in-person learning during the 2020/2021 academic school year.

Methods

Setting

This study took place in a Midwest county in the United States that hosts a large urban metro area (third largest populous in the state) surrounded by suburban communities. Neighboring counties, where approximately 40% of the metro area's children in foster care are placed, are primarily made up of small towns and more rural communities. The Midwest state enacted stay-at-home orders in late March of 2020, resulting in restrictions on in-person work attendance for non-essential staff, cancellations or transition to telehealth services for non-essential healthcare and behavioral health services, and remote learning for all students. These restrictions were lifted in late May of 2020, and continued oversight and mandates from that point forward were regulated at the county and school-district level. A mix of in-person, hybrid, and remote learning, varying by school district, occurred during the 2020/2021 school year. A gradual transition from telehealth to in-person for physical and behavioral health services was observed over the same time period. Under stay-at-home orders (March-May of 2020), child protective services staff and court personnel worked remotely when possible, but child protective services staff were required to complete home visits in-person and to support supervised and unsupervised visitation (with virtual visits as an option) between parents and their children in accordance with the case plan for the individual child.

Participants

Caregivers (N=186) were invited to participate based on the timing of a new child in foster care's placement in their home, such that 54% of participants had a new child placed before June of 2020, corresponding to the period when stay-at-home orders were in place in the state where this study occurred, and the remaining 46% with new placements occurring between June and October of 2020. Purposive recruitment was stratified to reflect the proportion of licensed (60%) and kinship caregivers (40%) in the state. The target sample reflected the gender (88% females), age (M=46.10, SD=12.47), and racial/ethnic distributions (53% who were black, 42% who were white, 4% who were multiracial) of the population of caregivers for children in foster care in the state where the study occurred.

Procedures

The study team reviewed child protective services records for placement changes between December 2019 and March 2020 and monthly between April 2020 and October 2020 to target a representative sample of caregivers and children. Caregivers received letters notifying them of the study and procedures for opting out of contact. A study team member subsequently contacted each caregiver to complete survey questions via phone. A total of $N=275$ caregivers were contacted at least one time via phone with an invitation to participate, $n=186$ caregivers consented to participate, $n=55$ caregivers declined participation, and $n=34$ caregivers never responded to phone calls or text messages regarding this study. This study is therefore based on a sample size of $N=186$. Caregiver surveys took approximately 45 min to complete; participants received a \$15 gift card. The institutional review board at the academic medical center where the study took place reviewed and approved this observational, cross-sectional study as less than minimal risk.

Measures

Surveys included 30 items assessing services and academic activities for the focal child, distinguishing between services prior to and following the loosening of restrictions in May of 2020. This includes whether academic activities occurred virtually or in person, as well as details about childcare arrangements, family visitation, and how caseworkers and other professionals interacted with the child in foster care and the licensed or kinship family. Caregivers also reported if they had requested or experienced a placement change and the timing and reason for those events, which was confirmed by child protective services record. Caregiver status as a licensed or kinship was also determined using caregiver report with confirmation by child protective services record review.

The impact of the COVID-19 pandemic on mental health, wellbeing, and daily living was assessed using 24 items from the COVID-19 Impact on Health and Wellbeing Survey (Robledo, 2020). Items assessed risk for COVID exposure among caregivers (e.g., In the last 2 weeks, have you worked or volunteered in a hospital, emergency room, clinic, medical office, long term care facility, or nursing home, ambulance services, first responder services, or any healthcare setting or taking care of patients as a student or as part of your work?) and economic and social impact among caregivers (e.g., Did you lose any wages because of the COVID-19 pandemic?) with responses in ordered categories reflecting low negative impact (e.g., 0=No, I maintained my job), moderate negative impact (e.g., 1=No but

I had a reduction in hours), and high negative impact (e.g., 2=Yes, I lost my job).

The impact of the COVID-19 pandemic on the family life of caregivers and their children was assessed using 27 items from the COVID-19 Exposure and Family Impact Survey (CEFIS; Kazak et al., 2021). Items assessed caregiver and child mood as a result of COVID (e.g., How relaxed versus anxious was your child?) with responses on a 5-point Likert scale where low scores (e.g., 1=Very relaxed/calm) indicated less negative impact or distress, while high scores (e.g., 5=Very nervous/anxious) represented more negative impact or higher distress.

To assess the impact of the COVID-19 pandemic on physical and mental health, sleep, and daily habits of children, The CoRonavIruS Health Impact Survey (CRISIS) V0.3 Parent/Caregiver Form (Merikangas et al., 2020) was adapted for the foster care context. A total of 47 items from the CRISIS were included (e.g., How worried has your child been about being infected with coronavirus?) with responses on a 5-point scale (e.g., 1=Not at all worried, 5=Extremely worried). Higher scores indicate more negative impact or distress.

To further understand stress experienced by children as a result of the COVID-19 pandemic, the 8-item Patient Reported Outcomes Measurement System Parent Proxy for the Psychological Stress Experiences Scale (PROMIS, 2020) was administered (e.g., My child felt concerned about what was going on in his or her life). Responses were on a 5-point scale where 1=Never and 5=Always. Higher scores indicated greater levels of stress.

Caregiver self-reported demographics included age, gender, race and ethnicity, marital status, education, employment status before and after the COVID-19 pandemic, and neighborhood setting. Caregivers reported their gender as male, female, transgender, or non-binary. Race was reported as one or more of the following: white, black, Asian or pacific islander, American Indian or native Hawaiian, or other. Reporting more than one race category indicated the caregiver was multi-racial. Ethnicity was reported as Hispanic or non-Hispanic. Caregiver self-reported race and ethnicity was recoded to represent non-Hispanic white (0) and black, indigenous and persons of color (BIPOC; 1). Caregivers self-identified their partner status as married, widowed, separated, divorced, single and never married, or a member of an unmarried couple. Responses were recoded to indicate a single (0) or partnered (1) status. Education was captured with response options from 1 (*Did not finish high school*) to 4 (*College, post-graduate, or professional school*). Employment status was captured across 9 categories: employed for wages, self-employed, out of work for one year or more, out of work for less than one year, homemaker, student, retired, unable to work, or other. Responses

Table 1 Descriptive statistics summarizing caregiver experiences during COVID by licensed and kinship status

| Variables | Licensed Caregivers (N = 140) | | Kinship Caregivers (N = 46) | |
|---|-------------------------------|-------|-----------------------------|--------|
| | Mean/n | SD/% | Mean/n | SD/% |
| Child age (years) | 7.74 | 5.73 | 7.46 | 5.45 |
| Length of placement (days) | 125.85 | 77.22 | 154.19 | 102.30 |
| Survey collected during COVID lock-down (%) | 62 | 44% | 20 | 43% |
| Placement continued (%) | 90 | 64% | 31 | 69% |
| Caregiver Age (years) | 45.54 | 12.80 | 47.80 | 11.52 |
| Female caregiver (%) | 121 | 86% | 42 | 91% |
| Caregivers who were BIPOC (%) | 76 | 54% | 32 | 70% |
| Two caregiver household (%) | 73 | 52% | 16 | 35% |
| Total number of household members | 3.91 | 2.22 | 2.63 | 1.37 |
| Total number of children in household | 2.92 | 1.76 | 2.00 | 1.30 |
| Received post-high school education/training (%) | 112 | 81% | 17 | 37% |
| Employed for pay (%) | 76 | 54% | 25 | 54% |
| Resides in urban setting (%) | 42 | 30% | 30 | 65% |
| Negative economic impact of COVID-19 | 2.05 | 1.98 | 2.28 | 1.99 |
| Negative social impact of COVID-19 | 1.69 | 0.83 | 1.54 | 0.75 |
| Risk of exposure to COVID-19 | 2.49 | 1.96 | 2.72 | 1.88 |
| Precautions used to protect against COVID-19 | 31.64 | 4.14 | 31.57 | 3.15 |
| Negative effect of COVID on relationships | 13.80 | 3.66 | 13.46 | 3.63 |
| Negative effect of COVID on caregiver health | 17.14 | 3.08 | 16.76 | 4.24 |
| Caregiver distress | 2.64 | 0.96 | 2.57 | 1.19 |
| Child distress | 2.54 | 0.98 | 2.29 | 1.20 |
| Faced challenges accessing mental health services (%) | 71 | 53% | 17 | 37% |
| Did not receive sufficient mental health services (%) | 42 | 32% | 9 | 20% |
| Did not receive sufficient dental services (%) | 39 | 29% | 16 | 36% |
| Did not receive sufficient developmental services (%) | 23 | 18% | 4 | 9% |
| Did not receive sufficient physical health services (%) | 12 | 9% | 2 | 4% |
| Did not receive sufficient child welfare services (%) | 23 | 17% | 8 | 17% |
| Caregiver has personal care needs (%) | 8 | 6% | 3 | 7% |
| Caregiver wanted support from the clinical team (%) | 7 | 7% | 3 | 9% |

were recoded to represent unemployed (0) or employed (1) status. Neighborhood setting was reported using 5 ordered categories: 1 = large city, 2 = suburb of a large city, 3 = small city, 4 = town or village, 5 = rural area. Child demographics

were obtained from child protective services records and included age in years and length of time in placement with the participating caregiver in days.

Analysis Plan

Univariate and bivariate statistics were examined for the full sample and separately by caregiver type and timing relative to stay-at-home orders. The study was sufficiently powered to detect group differences when $d \geq 0.4$, corresponding to a small-to-medium effect. When significant differences by caregiver type or timing of surveys was identified, linear regression models were used to examine differences in continuous outcome variables and logistic regression models were used to examine differences in categorical outcome variables while accounting for other demographic and social factors, including age, gender, non-Hispanic White vs. other race/ethnicity, urbanicity, education and employment status of caregivers. Analyses were completed using R Studio.

Results

Detailed descriptive statistics for licensed and kinship caregivers are provided in Table 1. Of 186 caregivers recruited, 25% were kinship caregivers and the remaining were licensed. Most caregivers in the sample identified as black or multi-racial; there was a smaller percentage of kinship caregivers who were non-Hispanic white (30%) compared to licensed caregivers (46%). Most caregivers were women and ages were similar for kinship and licensed caregivers and for the children placed in their homes. Approximately half of licensed caregivers were partnered, while most (65%) kinship caregivers reported being single. Higher percentages of kinship caregivers resided in urban settings and higher percentages of licensed caregivers had received post-high school education or training. Employment prior to COVID-19 was similar for both groups of caregivers.

The experiences of caregivers during the COVID-19 pandemic

Licensed and kinship caregivers reported similar negative effects of COVID-19 across economic and social domains (see Table 1). Risks of exposure to COVID-19 and mitigation strategies against COVID-19 used (e.g., masking, social distancing) were also similar for both groups of caregivers. Caregivers reported similar rates of distress for themselves and the youth in their care. Bivariate statistics with Bonferroni correction indicated no statistical differences in the economic or social impacts of the pandemic on kinship and licensed caregivers.

Table 2 Bivariate comparisons examining differences in service access and need during (N=82) the peak of COVID restrictions vs. after restrictions were lifted (N=104)

| | During high-restriction period (n, %) | After restrictions were lifted (n, %) | χ^2 statistic (DF) |
|--|---------------------------------------|---------------------------------------|-------------------------|
| In-person mental health services for most visits | 3, 3.66% | 18, 17.31% | 17.41 (4)** |
| Dental care accessed | 0, 0% | 6, 5.77% | 21.42 (3)** |
| Primary care accessed | 30, 36.59% | 62, 59.62% | 7.19 (2)* |
| Foster care clinic accessed | 42, 51.22% | 98, 94.23% | 49.71 (3)** |
| In-person physical health services for most visits | 41, 50.00% | 91, 87.50% | 10.57 (4)* |
| Child received needed physical health services | 66, 80.49% | 98, 94.23% | 3.94 (1)* |
| Daily school attendance | 31, 37.80% | 57, 54.81% | 13.04 (4)* |
| Most education was delivered in-person | 3, 3.66% | 20, 19.23% | 39.96 (4)** |
| Most education was delivered virtually | 34, 41.46% | 25, 24.04% | 22.88 (4)** |
| 4 or more hours of education completed each day | 13, 15.85% | 49, 47.12% | 19.21(1)** |
| County child welfare services was mostly in person | 13, 15.85% | 25, 24.04% | 15.49(4)** |
| Contact with GAL/CASA | 49, 59.76% | 89, 85.58% | 20.42(4)** |
| GAL/CASA contact was mostly in person | 22, 26.83% | 46, 44.23% | 9.82 (4)* |
| Weekly visits with family of origin was primarily in person | 19, 23.17% | 54, 51.92% | 34.21(4)** |
| Weekly visits with family of origin was primarily virtual | 23, 28.05% | 4, 3.85% | 36.14(4)** |
| Child was somewhat/very disengaged in virtual visits | 18, 21.95% | 9, 8.65% | 9.64 (3)* |
| Child was in respite | 2, 2.44% | 28, 26.92% | 18.97(3)** |
| Caregiver requested to have child moved to another placement | 0, 0% | 20, 19.23% | 14.55(1)** |

*p<.05, ** p<.01

Licensed and kinship caregiver reports about access to services for youth in foster care during the pandemic also did not significantly differ ($ps>0.05$). The largest gap was in mental health services, where 47% of caregivers reported challenges accessing mental health services, and 27% of caregivers reported that the mental health services children did receive during the pandemic were insufficient. Smaller percentages of caregivers reported challenges accessing dental (30%), developmental (15%), and medical (8%) services. Some caregivers also experienced challenges with

receipt of child protective services support (17%), with 5% of caregivers in the study requesting support for specific social issues from the study team. Counter to our hypotheses, there were no differences in caregiver experiences for caregivers who were non-Hispanic white vs. black/African American/multiracial (results available by request).

Variation based on timing of survey data collection.

Caregivers completed surveys either during the peak of the COVID-19 shut-down (March-May 2020; 44%) or after restrictions were lifted (June-December 2020; 56%). Not surprisingly, there were significant differences in the proportion of services delivered virtually as well as access to services for youth at the peak of the shut-down compared to when restrictions were lifted. These differences were examined across domains of healthcare services, education, child welfare, and family visitation (Table 2).

Healthcare. With respect to healthcare, a significantly higher percentage of caregivers reported better access to services after restrictions were lifted, and significantly more of those services were delivered in-person.

Education. Similar patterns to healthcare were observed for education, where during the peak of the shut-down, only 16% of youth enrolled in school reported completing 4 or more hours of education (all virtual) each day, and that percentage increased significantly, to 47%, after restrictions were lifted and school resumed.

Child welfare and family visitation. Access to and interactions with caseworkers and guardians ad litem or court-appointed special advocates followed similar trends of increased access and more in-person contact. Of particular importance, family visitation for children in foster care also shifted with stay-at-home orders, where caregivers reported more virtual visits and lower child engagement during the peak of the shut-down, and reductions in virtual visits observed as restrictions were lifted. Among those who continued with virtual visits when restrictions were lifted, caregivers reported that children participating virtually were more engaged, on average, compared to earlier in the pandemic. Finally, both placement changes (for any reason) and use of respite were higher after restrictions were lifted.

While differences in youth services were identified based on timing of surveys, there were no significant differences in caregiver experiences early vs. later in the pandemic. Caregivers' reports of their needs and experiences related to economic, social, and health risks persisted at similar levels throughout the pandemic (results available by request).

Discussion

This study described the experiences of licensed and kinship caregivers of children in foster care during the

COVID-19 pandemic, spanning periods of high-restriction and shutdown through when restrictions were being lifted. The impact of the pandemic on caregivers and youth varied in ways that were generally unexpected. First, across most indicators, licensed and kinship caregivers experienced similar challenges with respect to accessing services for their children and their own experiences and risks; rates were also similar by race. Second, access to services and resources for youth in foster care, including education, was low following the statewide COVID-19 shutdown, with increased participation and access as restrictions were lifted. Contrary to expectations, shifts in restrictions did not improve caregiver-reported risks and stressors, and the use of respite as well as placement changes were higher when restrictions decreased. When interpreted within the context of the broader literature demonstrating that caregivers support day-to-day access to services for children in foster care (Greiner et al., 2015; Stone et al., 2006), and impact children's behaviors and adjustment while they are in foster care (Dubois-Comtois et al., 2015), these findings provide some important insight into the impact of public health crises for licensed and kinship caregivers and the youth they support, which could be beneficial for informing future programs and services when communities face similar crises.

Much of the literature examining licensed and kinship caregivers has highlighted systemic disparities between these two groups with respect to economic resources, social support, and qualifications for federal assistance in supporting youth in foster care (Font, 2014; Schwartz, 2002). These disparities were reflected in the demography of the caregivers who participated in this study. In these data, licensed families, who are often better resourced than kinship families, had similar experiences to kinship families with respect to access to services, the economic and social impact of COVID-19, and caregiver and child distress during the pandemic. Across the domains assessed in this study, challenges faced by caregivers and the children in their care were similar, particularly during times when shutdown restrictions were at their peak. It may be that universal mandates around remote learning, restricted healthcare access, etc. created a level playing field, resulting in similar struggles despite other known inequities between these groups of caregivers. It may also be that licensed and kinship caregivers received sufficient supports from federal, state, and local services (e.g., bolstered unemployment benefits, stimulus checks) to ensure a safety net was in place for those licensed and kinship families that were most vulnerable, creating equity across caregivers (Cheng et al., 2020). Regardless of the cause, these findings point to the importance of ensuring that recovery services to ameliorate the consequences of the COVID-19 pandemic remain available to all caregivers and the youth in their homes.

With respect to differences early in the pandemic, when COVID restrictions were high, and later in the pandemic, when many restrictions had been lifted, these findings describe significant improvements in access to services and resources, including healthcare services, child protective services supports, education, and family visitation, as restrictions were lifted and in-person services became more widely available again. These findings highlight an existing digital divide (Venkat, 2001) that extends to youth in foster care and their caregivers, either because services were not able to successfully transition to virtual platforms or because caregivers were not successful at accessing those virtual services (Gonzales, 2016; Hirko et al., 2020). The variation in virtual education documented for other populations (e.g., Jones et al., 2021), where high-resourced schools were more successful at implementing virtual education compared to low-resourced schools (Walters, 2020) may provide some insight into these findings. Technology resources for youth in foster care and their caregivers may need to be a focus as infrastructure and other enhancements to create equity in technology access are realized, which may be relevant to all services, including education and physical and behavioral healthcare services (Hoffman, 2020). It may also be that caregivers do not desire virtual services, even if they are made available – more research is needed to understand the dynamics at play, especially as we leverage learning from this pandemic to plan and prepare for future public health crises.

The lack of engagement in education and family visitation across virtual environments are also indicative of an increased potential risk for youth in foster care to be farther behind academically, as a result of not accessing educational services in virtual environments and during the shut-down, combined with known academic delays already occurring as youth enter foster care and change placements (Stone et al., 2006). Initiatives to encourage and support in-person learning (e.g., The American Academy of Pediatrics, 2021) are helpful, but for youth in foster care, additional supports may be needed now, when restrictions are lifted, as it is possible that the consequences of these repeated education gaps will manifest themselves later in a child's academic career. Similarly, research understanding the longer-term consequences of disrupted and virtual visitation on permanency and reunification are justified, given that the effects of the COVID-19 pandemic may have immediately been observed on visitation, but those could have downstream consequences for youth and their families.

Declines in respite and placement changes during the shut-down are also notable, and may reflect a variety of factors. It is possible that child protective services was discouraging placement changes and respite as COVID-19 mitigation and containment strategies to minimize risk of

spread from one household to another. Restricted access to the court outside of virtual hearings may also have contributed to fewer placement moves. As a result, caregivers may have managed without the option of placement changes or respite, resulting in a rebound when restrictions were lifted. It is also possible that, because families were at home and many demands were reduced, children in foster care and their caregivers did not require respite and were able to maintain children in their homes. Further, because all caregivers did not participate in this study, it may be that those who experienced respite and placement disruptions during stay-at-home orders are not reflected in this sample. Finally, it is possible that the negative consequences of disrupted services and limited access to resources to help were not immediate, resulting in a delayed increase in placement disruptions and use of respite that was observed after restrictions were lifted. More research to understand the dynamics of those decisions is warranted.

The findings of this study should be interpreted in the context of several limitations. First, many measures of the impact of COVID-19 were not validated at the time this study was conducted, and none were specifically designed with the foster care population in mind. As a result, there may be some bias in those measures that are influencing our findings. Additionally, there is a potential for bias in caregiver reporting of compliance with stay-at-home orders, social distancing recommendations, mask mandates, and access to services, as there was no objective data to which these reports could be compared. Caregivers were also asked to reflect on their experiences over the course of the pandemic, and as a result findings are subject to recall bias. Concurrent, longitudinal measurement of the impact of COVID-19 would likely result in more accurate reporting of caregiver experiences, as would adding data from multiple sources, including objective records and reports from children in foster care. Further, caregivers in this study were primarily caring for children under the age of 5. A study specifically targeting school-aged children and adolescents is justified. Finally, the COVID-19 pandemic was the first global health crisis to take place since major child welfare reforms have been enacted to create the child welfare system in place in the United States today. This leaves little opportunity to compare the current findings to other pandemics or public health crises; the lack of a comparison is a limitation. Studies monitoring wellbeing and access to services among youth in foster care that started before the pandemic and have continued during the pandemic may address these concerns.

Conclusions

The COVID-19 pandemic is a new and unique challenge for an already stressed foster care system. In some ways, the pandemic appears to have leveled the playing field for licensed and kinship caregivers, as all caregivers experienced decreased access to services and increased distress resulting from restrictions to reduce the spread of COVID-19. Stay at home orders, while necessary, were the hardest times for caregivers, with improvements seen as restrictions were lifted. However, some threats to well-being for youth in foster care, including placement disruptions, actually peaked after restrictions were lifted. Other implications, such as the impact of decreased educational services and decreased visitation with family, may take years to fully be recognized. The full impact of the COVID-19 pandemic on the population of children in foster care cannot be fully appreciated at this time, but this study identifies that services to mitigate the effects of the COVID-19 shut-down should be available to all caregivers and the children in foster care placed with them, and should consider the full span of the COVID-19 pandemic, rather than being restricted to only periods where the highest restrictions and stay-at-home orders were in place, in order to fully support youth in foster care and their caregivers.

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Authors' contributions SJB and MVG were responsible for all aspects of study design. KN oversaw data collection efforts in collaboration with SJB and MVG. KN and SJB completed data analyses. SJB wrote the first draft, and MVG and KN contributed to writing and revisions.

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Availability of Data and Material Data can be made available with an established data transfer agreement across institutions, initiated by contacting the corresponding author.

Code Availability Code used for analyzing these data will be provided upon emailed request to the corresponding author.

Declarations

Conflict of Interest The authors attest that they have no conflicts of interest or competing interests to disclose.

Ethics Approval This observational study received institutional review board (IRB) approval at Cincinnati Children's Hospital Medical Center and was designated as minimal risk.

Consent to Participate All participants provided verbal consent to participate prior to completing surveys.

Consent for Publication All authors approve this submission for publication.

References

- Blome, W. W. (1997). What happens to foster kids: Educational experiences of a random sample of foster care youth and a matched group of non-foster care youth. *Child and Adolescent Social Work Journal*, 14(1), 41–53
- Cheng, T. L., Moon, M., Artman, M., & On behalf of the Pediatric Policy Council. (2020). Shoring up the safety net for children in the COVID-19 pandemic. *Pediatric Research*, 88(3), 349–351. <https://doi.org/10.1038/s41390-020-1071-7>
- Chernoff, R., Combs-Orme, T., Risley-Curtiss, C., & Heisler, A. (1994). Assessing the health status of children entering foster care. *Pediatrics*, 93(4), 594–601
- Dubois-Comtois, K., Bernier, A., Tarabulsy, G. M., Cyr, C., St-Laurent, D., Lanctôt, A. S. ... Béliveau, M. J. (2015). Behavior problems of children in foster care: Associations with foster mothers' representations, commitment, and the quality of mother-child interaction. *Child Abuse & Neglect*, 48, 119–130. <https://doi.org/10.1016/j.chiabu.2015.06.009>
- Font, S. A. (2014). Kinship and Nonrelative Foster Care: The Effect of Placement Type on Child Well-Being. *Child Development*, 85(5), 2074–2090. <https://doi.org/10.1111/cdev.12241>
- Gonzales, A. (2016). The contemporary US digital divide: From initial access to technology maintenance. *Information, Communication & Society*, 19(2), 234–248. <https://doi.org/10.1080/1369118X.2015.1050438>
- Greiner, M., Beal, S., Nause, K., & Ehrhardt, J. (2021). Developmental service referrals and utilization among young children in protective custody. *The Journal of Pediatrics*, 234, 260–264
- Greiner, M. V., Beal, S. J., Nause, K., Staat, M. A., Dexheimer, J. W., & Scribano, P. V. (2017). Laboratory screening for children entering foster care. *Pediatrics*, 140(6), e20163778. <https://doi.org/10.1542/peds.2016-3778>
- Greiner, M. V., Ross, J., Brown, C. M., Beal, S. J., & Sherman, S. N. (2015). Foster caregivers' perspectives on the medical challenges of children placed in their care: Implications for pediatricians caring for children in foster care. *Clinical Pediatrics*, 54(9), 853–861
- Hirko, K. A., Kerver, J. M., Ford, S., Szafranski, C., Beckett, J., Kitchen, C., & Wendling, A. (2020). Telehealth in response to the COVID-19 pandemic: Implications for rural health disparities. *Journal of the American Medical Informatics Association*, 27(11), 1816–1818
- Hoffman, D. A. (2020). Increasing access to care: Telehealth during COVID-19. *Journal of Law and the Biosciences*, 7(1), 1–15. <https://doi.org/10.1093/jlb/l5aa043>
- Jee, S. H., Szilagy, M., Ovenshire, C., Norton, A., Conn, A. M., Blumkin, A., & Szilagy, P. G. (2010). Improved detection of developmental delays among young children in foster care. *Pediatrics*, 125(2), 282–289. <https://doi.org/10.1542/peds.2009-0229>
- Jones, N., Tapia, S., Baird, I., Guglielmi, S., Oakley, S., Yadete, E. ... Pincock, K. (2021). Intersecting barriers to adolescents' educational access during COVID-19: Exploring the role of gender, disability and poverty. *International Journal of Educational Development*, 85, 102428. <https://doi.org/10.1016/j.ijedudev.2021.102428>
- Kazak, A. E., Alderfer, M., Enlow, P. T., Lewis, A. M., Vega, G., Barakat, L. ... Phan, T. L. (2021). COVID-19 Exposure and Family Impact Scales: Factor Structure and Initial Psychometrics. *Journal of Pediatric Psychology*, 46(5), 504–513. <https://doi.org/10.1093/jpepsy/jsab026>
- Loria, H., McLeigh, J., Wolfe, K., Conner, E., Smith, V., Greeley, C. S., & Keefe, R. J. (2021). Caring for children in foster and kinship care during a pandemic: Lessons learned and recommendations. *Journal of Public Child Welfare*, 0(0), 1–24. <https://doi.org/10.1080/15548732.2021.1965065>
- Merikangas, K., Milham, M., & Stringaris, A. (2020). *The Coronavirus Health Impact Survey (CRISIS)*. https://www.phenxtoolkit.org/toolkit_content/PDF/CRISIS_Baseline_ParentCaregiver.pdf
- PROMIS (2020). <https://www.healthmeasures.net/explore-measurement-systems/promis>
- Robledo, C. (2020). *COVID-19 Impact on Health and Wellbeing Survey*. University of Texas Rio Grande Valley School of Medicine. nml.nih.gov/dr2/COVID_Impact_on_Health_Wellbeing_Eng.pdf
- Schwartz, A. E. (2002). Societal Value and the Funding of Kinship Care. *Social Service Review*, 76(3), 430–459. <https://doi.org/10.1086/341183>
- Stone, S., D'andrade, A., & Austin, M. (2006). Educational Services for Children in Foster Care: Common and Contrasting Perspectives of Child Welfare and Education Stakeholders. *Journal of Public Child Welfare*, 1(2), 53–70. https://doi.org/10.1300/J479v01n02_04
- The American Academy of Pediatrics (2021). *COVID-19 Guidance for Safe Schools*. <http://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/>
- U.S. Department of Health and Human Services (2020). *The AFCARS Report* (p. 6) [27]. <https://www.acf.hhs.gov/sites/default/files/cb/afcarsreport27.pdf>
- Venkat, K. (2001). Digital Divide and Poverty. *Journal of Poverty*, 5(4), 113. https://doi.org/10.1300/J134v05n04_06
- Walters, A. (2020). Inequities in access to education: Lessons from the COVID-19 pandemic. *The Brown University Child and Adolescent Behavior Letter*, 36(8), 8–8. <https://doi.org/10.1002/cbl.30483>
- White, T., Scott, L. D. Jr., & Munson, M. R. (2018). Extracurricular activity participation and educational outcomes among older youth transitioning from foster care. *Children and Youth Services Review*, 85, 1–8

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