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FINDINGS BRIEF

RURAL & MINORITY Health Research Center

Kristen Figas, EdS; Theodoros Giannouchos, PhD, MS; Elizabeth Crouch, PhD

- **Access to Mental Health Services**
  - Both urban and rural children had greater difficulty accessing mental health services during the pandemic (July 2020 – January 2021) than they did prior to the pandemic (2018-2019).
  - Access to insurance coverage for mental health services improved during the first year of the COVID-19 pandemic for both urban and rural children, but greater than a third of all caregivers continue to report insufficient coverage.
- **Receipt of Mental Health Services**
  - Rural and urban children were equally likely to receive mental health services prior to and during the COVID-19 pandemic.
  - Amongst children with mental health conditions, rural children were less likely to take psychiatric medication than urban children, and this remained unchanged during the first year of the pandemic.

Rural-Urban Differences in Child and Adolescent Access to and Receipt of Mental Health Services Prior to and During the COVID-19 Pandemic: Results from the National Survey of Children's Health

BACKGROUND

The youth mental health crisis has been declared a national priority,[1-2] yet access to mental health services remains elusive for many. Before the COVID-19 pandemic (i.e., prior to March 2020), half of children and adolescents diagnosed with any mental health condition—such as anxiety, depression, or behavioral problems—did not receive any form of treatment.[3] Previous research suggests that children from different racial/ethnic backgrounds, as well as children who reside in rural versus urban areas, experience mental health conditions at similar rates.[4] However, there are disparities in access to mental health services. Racially and ethnically minoritized children and children residing in rural areas experience more difficulties in accessing such services.[4]

It has been speculated that the COVID-19 pandemic, beginning in March 2020 and continuing to the present time, has further interfered with access to mental health services.[5] Schools have long been the primary context in which children access mental health services,[6] and pandemic-related school closures have severely disrupted access to the prevention and intervention services so many children and families rely upon.[7] Children and adolescents in rural areas, who have already more limited access to health care[8] and mental health[4] resources under normal circumstances, are likely to feel these effects acutely.

Rural children and adolescents are among various groups surmised to be at greater risk for pandemic-related mental health challenges.[1] Nonetheless, there is a paucity of empirical research

investigating the impact of the COVID-19 pandemic on mental health service accessibility and utilization in urban versus rural locations. This study fills a critical gap by comparing rural-urban differences in access to and receipt of mental health services to evaluate the impact of the COVID-19 pandemic on service accessibility and utilization in different geographic settings. In this policy brief, we analyze data from a large, national sample of children and adolescents to examine gross inter-group similarities and differences and offer timely recommendations for alleviating the youth mental health crisis.

METHODS

Data were drawn from the 2018-2019 and 2020 public use National Survey of Children's Health (NSCH). The NSCH is an online and mail survey of U.S. households with children ages 0-17 years; parents or guardians answer questions regarding the child's physical and emotional health.[9] Consistent with the language used in the NSCH, we utilize the term child(ren) to refer to both children and adolescents throughout the remainder of this brief. The 2018 data were collected between June 2018 and January 2019, the 2019 data were collected between June 2019 and January 2020, and the 2020 data were collected between July 2020 and January 2021. Thus, the 2018-2019 data reflect pre-COVID conditions while the 2020 data reflect conditions during the first year of the COVID-19 pandemic. To examine differences between pre-COVID conditions and conditions during the pandemic, combined data from 2018 and 2019 were compared with data from 2020.

A total of 102,740 survey-responses were collected including 30,530 surveys in 2018, 29,433 surveys in 2019, and 42,777 surveys in 2020. Our sample was limited to cases with geographic information (63,874) and complete responses to the variables of interest (57,887) which reflected children 3-17 years of age (since mental health questions began at age 3).[10-11] In total, we compared 32,923 children from 2018-2019 with 24,964 children from 2020.

Access to and receipt of mental health services were measured via questions in the Emotional and Mental Health module, Health Care Access and Quality module, and Health Insurance Coverage module assessing the difficulty of obtaining mental health treatment whether a child has received mental health treatment, whether a child has taken medication for mental health problems, and insurance coverage for mental health needs. Table 1, below, includes the precise NSCH questions used to assess each content area.

Table 1: NSCH Questions Assessing Youth Mental Health Care

Access to Mental Health Care	1. How difficult was it to get the mental health treatment or counseling that this child needed? 2. Thinking specifically about this child's mental and behavioral health needs, how often does this child's health insurance offer benefits or cover services that meet these needs?
Receipt of Mental Health Care	1. During the past 12 months, has this child received any treatment or counseling from a mental health professional? 2. During the past 12 months, has this child taken any medication because of difficulties with their emotions, concentration, or behavior?

FINDINGS

Survey Participant Characteristics

Most children in the current sample resided in an urban area (91.4%) and came from a household with two parents who are currently married (64.9%). The majority of caregiver

respondents spoke English as their primary language (13.5% had a primary language other than English) and had a least some college education (73.6%). Just under twenty-percent of children (17.4%) resided in households with income below the federal poverty level with a smaller proportion of the sample living below the federal poverty line in 2020 compared to 2018-2019 (18.4% in 2018-2019 vs. 16.4% in 2020; $p = .018$). Slightly more than half of the children were male (51.1%) and non-Hispanic white (50.7%). Children aged 10-14 years comprised the greatest percentage of the sample (28.9%), followed by children aged 3-4 years (27.1%), children aged 5-9 years (27.4%), and adolescents aged 15-17 years (16.6%). In addition, approximately one fifth of the children had special needs (19.9%). No significant demographic differences were observed for these child-level variables between 2018-2019 and 2020.

More than half of the children received care from a professional considered to be their personal doctor or nurse (56.2%) with the remainder receiving care from more than one person (17.9%) or not having a regular healthcare provider (25.9%). Most families had access to private health insurance (62.5%) with an additional third (32.1%) having public health insurance coverage. While 70% of children did not use mental health services, more than half of those who did (16.9% of all children) had health insurance that covered their mental health needs. Alongside a sharp increase in the percentage of children who used mental health services during the pandemic (18.3% in 2018-2019 vs. 41.5% in 2020), the percentage of children who always (7.8% in 2018-2019 vs. 25.8% in 2020), usually (5.1% in 2018-2019 vs. 10.1% in 2020), and sometimes (2.8% in 2018-2019 vs. 3.8% in 2020) had mental health coverage increased whereas the percentage of children who never had coverage diminished (2.7% in 2018-2019 vs. 1.7% in 2020, $p < .001$).

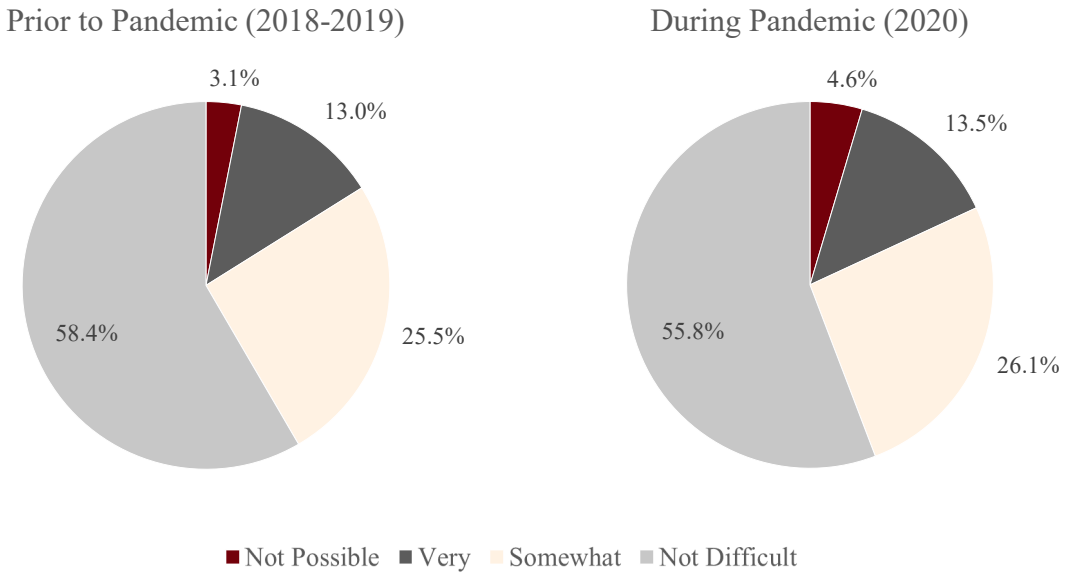
Additional demographic data disaggregated by survey time period are included in Table A-1 in the Appendix.

Access to Mental Health Services

Urban and rural children experienced similar access to mental health services prior to and during the COVID-19 pandemic with more than half of caregivers reporting that obtaining access to mental health services was not difficult (Figures 1 and 2). Urban children had greater difficulty obtaining services during the pandemic with more caregivers reporting that mental health services were somewhat difficult to access (25.5% in 2018-2019 vs. 26.1% in 2020), very difficult to access (13.0% in 2018-2019 vs. 13.5% in 2020), or that it was not possible to obtain services (3.1% in 2018-2019 vs. 4.6% in 2020, $p = .001$). Likewise, rural children had greater difficulty accessing services during the pandemic although these changes were not statistically significant. More rural caregivers reported that mental health services were somewhat difficult to access (23.3% in 2018-2019 vs. 30.7% in 2020) or that it was not possible to obtain services (2.2% in 2018-2019 vs. 3.6% in 2020), while fewer reported that it was very difficult to access mental health care (14.8% in 2018-2019 vs. 13.0% in 2020).

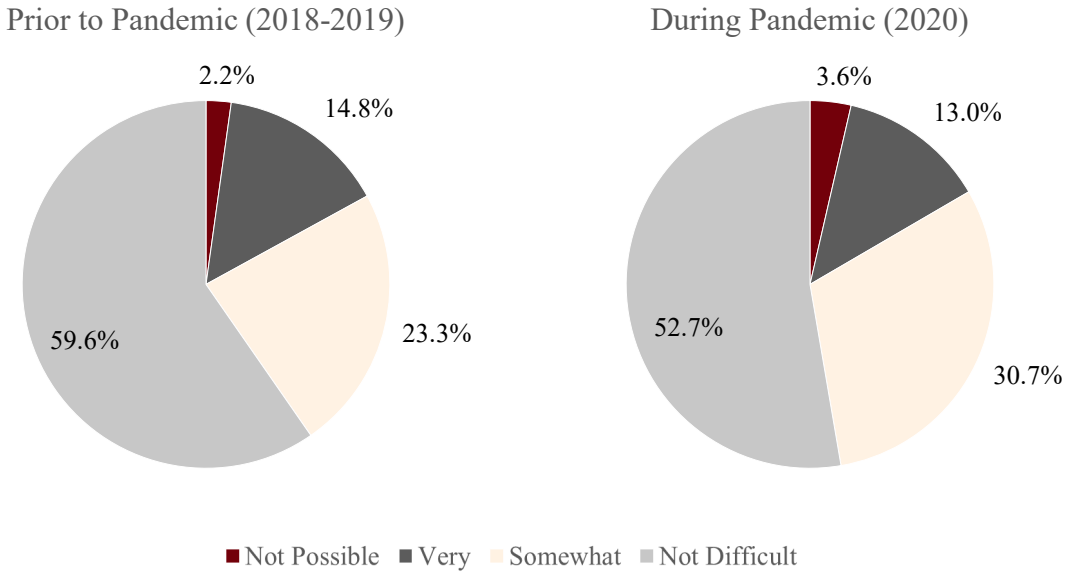
Urban and rural children had similar access to insurance coverage for mental health services both prior to and during the COVID-19 pandemic (Figures 3 and 4). However, during the pandemic, coverage of mental health services improved for both urban and rural children. A significantly greater percentage of caregivers reported that their child's insurance always covered their mental health needs during the pandemic (25.6% urban, 28.0% rural) than prior to the pandemic (7.7% urban, 9.4% rural, $p < .001$) (Figures 3 and 4, respectively). Simultaneously, a significantly lower percentage of caregivers reported that their child did not use mental health services during the pandemic (58.5% urban, 59.5% rural) than prior to the pandemic (81.8% urban, 81.0% rural, $p < .001$).

Figure 1. Difficulty of Accessing Mental Health Services for Urban Children Prior to and During the COVID-19 Pandemic



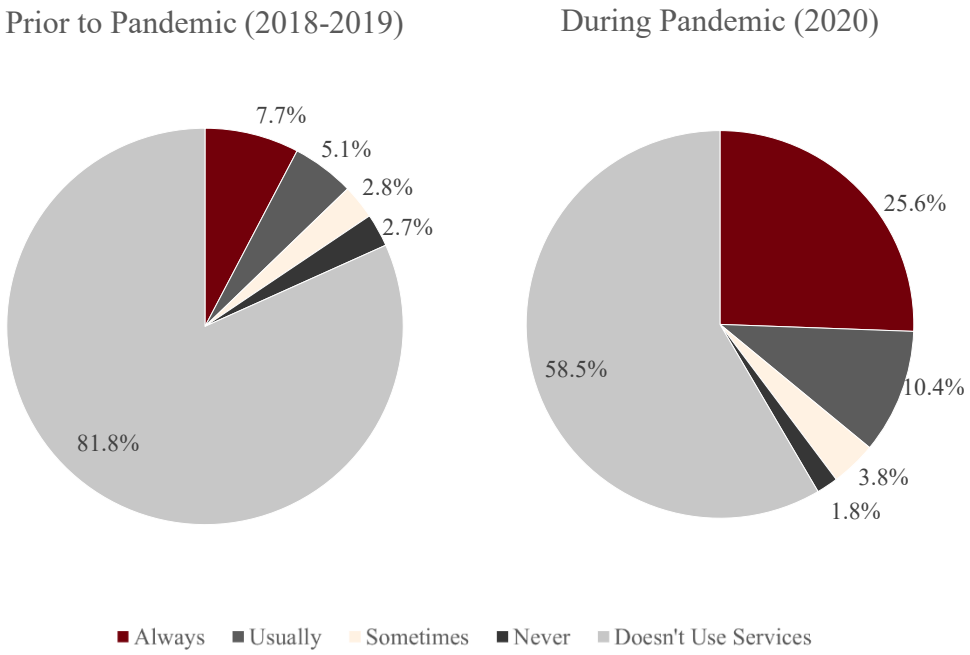
Note. Urban children had significantly greater difficulty accessing mental health services during the COVID-19 pandemic, p=.001.

Figure 2. Difficulty of Accessing Mental Health Services for Rural Children Prior to and During the COVID-19 Pandemic



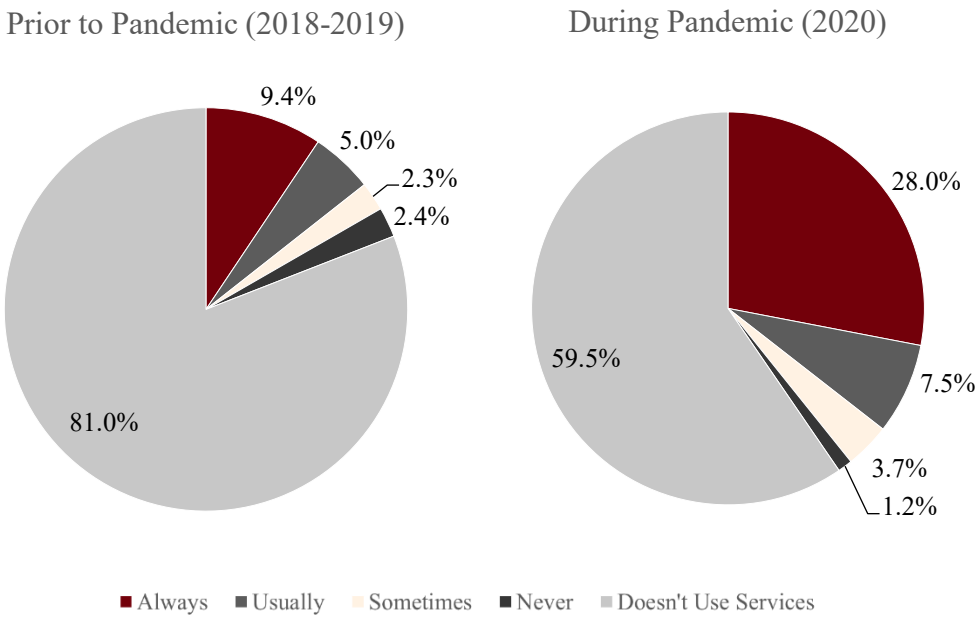
Note. Rural children experienced a similar degree of difficulty accessing mental health services prior to and during the COVID-19 pandemic.

Figure 3. Mental Health Service Coverage Among Urban Children Prior to and During the COVID-19 Pandemic



Note. Urban children's access to insurance coverage for mental health services significantly improved during the COVID-19 pandemic, $p<.001$.

Figure 4. Mental Health Service Coverage Among Rural Children Prior to and During the COVID-19 Pandemic

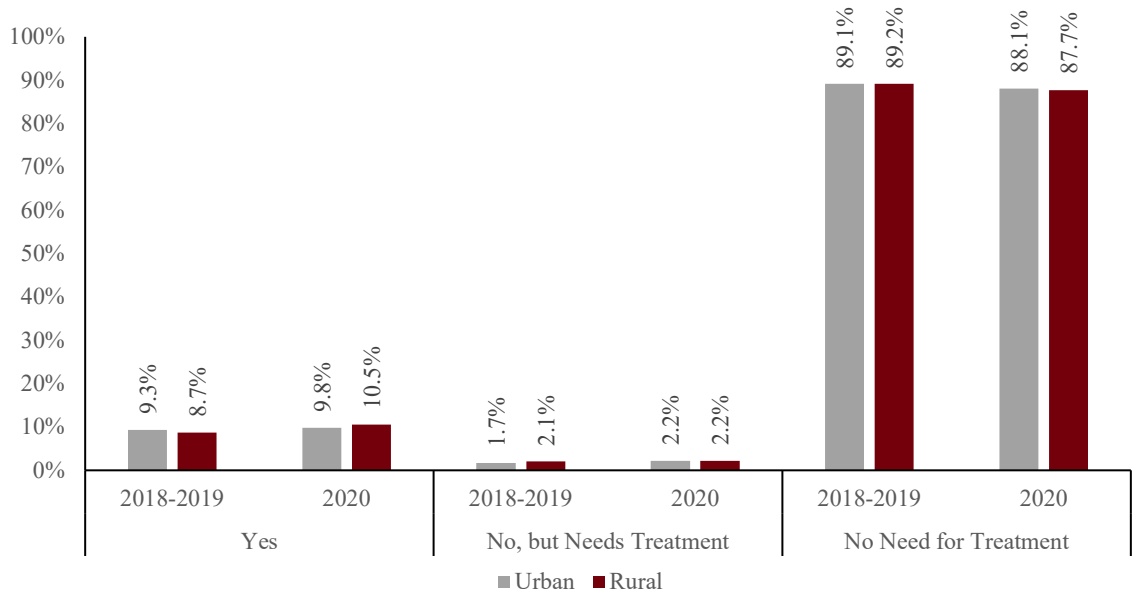


Note. Rural children's access to insurance coverage for mental health services significantly improved during the COVID-19 pandemic, $p<.001$.

Receipt of Mental Health Services

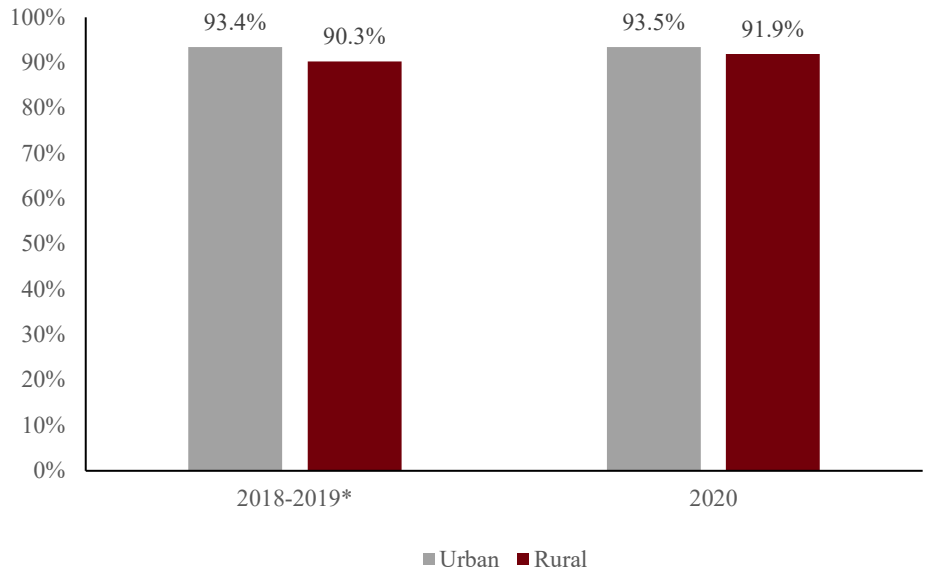
Receipt of mental health treatment or counseling did not differ between urban and rural children prior to or during the COVID-19 pandemic (see Figure 5, below). In contrast, differences in the use of psychiatric medication were evident (Figure 6). Prior to the pandemic, rural children with a mental or behavioral health condition were less likely than their urban counterparts to take medication to manage their symptoms (91.1% rural vs. 93.5% urban, $p < .001$); however, there were no differences in medication use during the pandemic. Moreover, the percentage of urban and rural children taking psychiatric medication did not change significantly over time.

Figure 5. Percentage of Rural and Urban Children Receiving Mental Health Services Prior to and During the COVID-19 Pandemic



Note. No significant differences across location or time.

Figure 6. Percentage of Children with Mental Health Conditions Taking Psychiatric Medication Prior to and During the COVID-19 Pandemic



*statistically significant urban-rural

CONCLUSIONS

With childhood mental health conditions on the rise[12] and access to mental health services remaining elusive for many, examining geographic and temporal differences in access to and receipt of mental health services helps to illuminate gaps that can be targeted for improvement. This study investigated urban-rural differences in access to and receipt of childhood mental health services prior to and during the COVID-19 pandemic. We found partial evidence that the COVID-19 pandemic has disrupted access to mental health services as has been widely surmised. Caregivers of urban and rural children reported greater difficulty accessing mental health services during the pandemic, although this was only statistically significant for urban children. Despite differences in perceived difficulty of accessing services, there were no geographic differences in the receipt of mental health services. The only statistically significant difference in mental health services pertained to psychiatric medication: while rural children were less likely to take medication prior to the pandemic, this equalized during the pandemic.

Considering well-documented workforce shortages in the mental health services sector,[13] which are projected to continue growing through at least 2025,[14] understanding the differential impact of the COVID-19 pandemic on urban vs. rural children is essential for making informed decisions regarding resource prioritization. While workforce shortages exist across the country, historically they have been particularly robust in rural areas[15] and across the American South and West.[13] Interestingly, our findings suggest that both children in urban areas and rural areas experienced greater difficulties accessing services during the pandemic. In light of this and research suggesting urban youth suffered greater declines in mental health during the pandemic (see brief 1 in this series), it is imperative that workforce shortages, as well as other barriers to service accessibility and utilization in urban settings, receive particular attention in the months ahead.

While there have been increasing calls across service sectors to mitigate the youth mental health crisis,[1-2,16] these calls could be translated into actionable policies and procedures to support infrastructure and workforce development and to erode barriers to mental health service access and utilization. Beyond expanding mental health workforce capacity, it is imperative to fund training and technical assistance, increase the capacity of pediatric healthcare settings to respond to mental health concerns, improve reimbursement for mental health services, expand prevention programming to alleviate adverse childhood experiences (ACEs), and enhance funding for mental health and substance use prevention and treatment programs as well as in-home services.[16]

It is worth highlighting that these findings reflect changes in service accessibility and utilization during the first year of the COVID-19 pandemic, and it is likely that the impact of the pandemic on youth mental health systems will continue to evolve. Future research could continue examining youth mental health service access and utilization rates to inform timely policy revisions. For maximally beneficial policies, such research could include a comprehensive analysis of the unique barriers and facilitators of mental health service accessibility and utilization in rural and urban areas at the current stage of the pandemic with clear linkages to local, state, and federal policy, infrastructure, and implementation efforts.

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For more information about the Rural and Minority Health Research Center, contact Director Elizabeth L. Crouch, PhD (crouchel@mailbox.sc.edu).

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APPENDIX

Measures

Residence was classified using 2013 Rural Urban Commuting Area (RUCA) codes which measure rurality at the census tract level.[17] The use of RUCA rather than county allowed for inclusion of rural areas in large urban counties which cover many areas of the West. This study did not use the FORHP definition which adjusts for some larges area census tracts.

Race and ethnicity were self-reported by the parent and classified as non-Hispanic white, Non-Hispanic Black, Hispanic, and "Other" racial groups.

Four total questions measured various aspects of mental health service access and receipt of care (see Table 1). Two questions measured access to mental health care (difficulty of obtaining access and insurance coverage for mental health services), and two questions measured receipt of different types of mental health services (mental health treatment/counseling and psychiatric medication).

Analysis

Sociodemographic and socioeconomic characteristics of the sample were analyzed via descriptive statistics with bivariate analyses employed to examine differences across urban and rural youth. Descriptive statistics and bivariate analyses were likewise used to estimate the unadjusted associations, frequencies, and proportions. Appropriate survey sampling weights, cluster, and strata were used as instructed by the NSCH to ensure results are representative of the national population. Values $p<0.05$ were considered statistically significant.

Table A-1. Characteristics of Children ages 3 – 17, National Survey of Children's Health in Total and Stratified by Survey Year

Characteristic	All %	2018-19 %	2020 %	*P*-value
Characteristics of Child				
Sex of Child				0.884
Male	51.1	51.6	51.4	
Female	48.9	48.4	48.6	
Age of Child				0.921
3 to 4 years old	27.1	27.4	26.9	
5 to 9 years old	27.4	27.1	27.6	
10 to 14 years old	28.9	28.8	28.9	
15 to 17 years old	16.6	16.7	16.6	
Race/Ethnicity of Child				0.886
Non-Hispanic White	50.7	50.8	50.7	
Non-Hispanic Black	13.1	13.3	12.9	
Hispanic	25.1	25.0	25.2	
NH Other	11.1	10.9	11.2	
Special Health Care Needs				0.159
Yes	19.9	19.5	20.3	
Personal Doctor/Nurse				0.235
Yes, one person	56.2	56.2	56.2	
Yes, more than one person	17.9	18.4	17.4	
No	25.9	25.4	26.4	
Health Insurance				0.335
Public	32.1	32.4	31.9	
Private	62.5	62.6	62.4	
Public and Private	4.8	4.6	5.2	
Not Insured/ Unspecified	0.6	0.4	0.5	
Mental Health Coverage				**<.001**
Always	16.9	7.8	25.8	
Usually	7.6	5.1	10.1	
Sometimes	3.3	2.8	3.8	
Never	2.2	2.7	1.7	
Child does not use mental services	70.0	81.7	58.5	
Characteristics of Parent/Household				
Area of Residence				0.335
Urban	91.4	91.3	91.5	
Rural	8.6	8.7	8.5	
Primary Language				0.283
Not English	13.5	13.1	13.9	
Guardian Education				0.410
Less than high school or high school	26.4	26.0	26.7	
Some college or more	73.6	74.0	73.3	
Family Structure				0.059

Two parents, currently married	64.9	64.8	65.0	
Two parents, not currently married	8.3	8.6	7.9	
Single parent	21.9	21.2	22.5	
Other	4.9	5.3	4.6	
Poverty/Income Level				**0.018**
0-99% Federal Poverty Level	17.4	18.4	16.4	
100%-199% Federal Poverty Level	21.0	21.0	21.1	
200%-399% Federal Poverty Level	28.7	27.9	29.5	
400% Federal Poverty Level or above	32.9	32.8	33.1	

Bolded p-values represent statistical significance at $p<0.05$

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