

Research Brief

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Possible Impact of COVID-19 on the Physical and Mental Health of Mississippi Youth: A Review of YRBSS Survey Data

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Abstract

This research brief examined the COVID-19 pandemic's physical and mental health impact on youth in Mississippi public schools. Its goal is to provide information that can help educators, parents, and policymakers better understand and respond to the pandemic's short- and long-term impacts on youth and school systems. This study utilized a mixed-methods research design consisting of reviewing the research literature on the physical and mental health impact on youth, and reviewing the *Youth Risk Behavior Surveillance System (YRBSS)* dataset administered by the U.S. Center for Disease Control and Prevention. This dataset tracks youth behaviors over several years that could lead to poor health. A review of the research literature found COVID-19 did impact the physical and mental health status of many students across the United States. An analysis of YRBSS data revealed COVID-19 may have influenced Mississippi youth behaviors in terms of increases in obesity rates, poor diet, reduced exercise, and increases in mental health issues including suicidal thoughts, anxiety, and depression. Recommendations flowing from this study's findings include educating students, families, and school officials regarding the physical, mental, and cultural challenges faced by youth during the pandemic; and providing mental health services addressing issues associated with the "lack of social connectiveness" experienced by youth during the pandemic.

Possible Impact of COVID-19 on the Physical and Mental Health of Mississippi Youth: A Review of YRBSS Survey Data

Introduction

The COVID-19 pandemic had a devastating global impact affecting many countries and governments, including forcing mass quarantines of citizens and institutions (Brackx, 2023). Governments made decisions to lockdown or close most schools, workplaces and non-essential businesses in order to contain the COVID-19 virus (Cowie, 2021). As with other school districts across the United States, COVID-19 impacted the physical and mental health status of students attending Mississippi public schools. Some of the effects the pandemic had on young people included social isolation; changes in delivery of therapeutic services; and almost a complete loss of all structured occupations including schools (Power, E., et al., 2020). Many children affected by the pandemic experienced negative internal and external behaviors impacting their physical and mental health (Catalina, Man, et. al., 2022). Additional negative impacts on youth included lower self-esteem and increased incidence in eating disorders (Ramsey, Obeidallah and Abraham, 2023).

The purpose of this research brief is to examine the possible impact of the COVID-19 pandemic on the mental and physical health of youth in Mississippi public schools. While the overall impact of the pandemic has lessened since its height in 2020, the short- and long-term impacts are still being felt and experience in the general population (Reinert, et al.). This research brief seeks to provide information that can help educators, parents, and policymakers better understand the past, current, and potential future impacts of the virus. By doing so, those same groups can better prepare themselves and society to handle current and future problems impacting the healthy development of youth in Mississippi's public school system.

Literature Review

In reviewing the research literature, many areas related to the physical and mental health of adolescent youth were greatly affected by the COVID-19 pandemic. One researcher found significant increases in body weight and BMI during the pandemic among elementary and middle school-aged children (Brackx, 2023). Another researcher found the closure of schools and restricted access to peer groups caused acute anxiety and stress in young individuals (Cowie, 2021). Excessive exposure to social media platforms and news media coverage may have also increased mental distress (Cowie, 2021). One in three high schoolers experienced poor mental health during COVID-19 including prolonged feelings of sadness or hopelessness (Jones, 2022). Suicidal issues were another mental health concern that was prevalent. Some research found nearly 20% of youth seriously considering suicide, and 9.0% attempting suicide during a 12 month period preceding the surveying of youth on this issue (Jones, 2022). Female students generally reported higher rates of poor mental health and suicide compared to male students; and the prevalence was higher among White students versus Black students, and homosexual and LGBTQ students versus heterosexual students (Jones, 2022). Over 60 percent of youth with major depression did not receive any mental health treatment (Reinert, et al, 2021).

COVID-19 also generated many concerns regarding students attending Mississippi public schools. Four key areas of concern identified included academic learning losses; serving students

with disabilities; difficulty maintaining staffing resources; and providing broadband internet access (Wade, 2023). According to the *COVID-19 Education and Impact Report*, students experienced learning losses in Math proficiency and English/Language Arts proficiency during the pandemic (Wade, 2023). Students with disabilities were also among the hardest hit during the pandemic with school districts having difficulty meeting the physical and mental health needs of this population group (Wade, 2023).

Taken collectively, the above literature findings illustrate some of the wide-spread physical and mental impacts the COVID-19 pandemic had on students across the United States and in Mississippi. The following sections examine data on youth behaviors from the U.S. Center for Disease Control and Prevention. The purpose for examining this dataset is to determine if there is evidence identifying any of the above physical and mental health issues among youth in Mississippi public schools.

Methods

This study utilized a mixed-methods research design consisting of reviewing the research literature on the physical and mental health impact of the COVID-19 pandemic on youth in general; and reviewing the *Youth Risk Behavior Surveillance System (YRBSS)* dataset administered by the U.S. Center for Disease Control and Prevention (CDC, 2023).

The YRBSS is a set of nationwide surveys (sortable by individual states) given to students grades 9 through 12. The surveys are administered every other year, and are used to track youth behaviors that could lead to poor health (CDC, 2023). Some of the data categories listed on the survey include:

- Student demographic data --- sex, sexual identity, race, ethnicity, and grade
- Youth health behaviors and conditions data --- sexual, injury and violence, bullying, diet and physical activity, obesity, and mental health (including suicide)
- Substance use behavior data --- electronic vapor product and tobacco product use, alcohol use, and other drug use
- Student experiences data --- parental monitoring, school connectedness, unstable housing, and exposure to community violence.

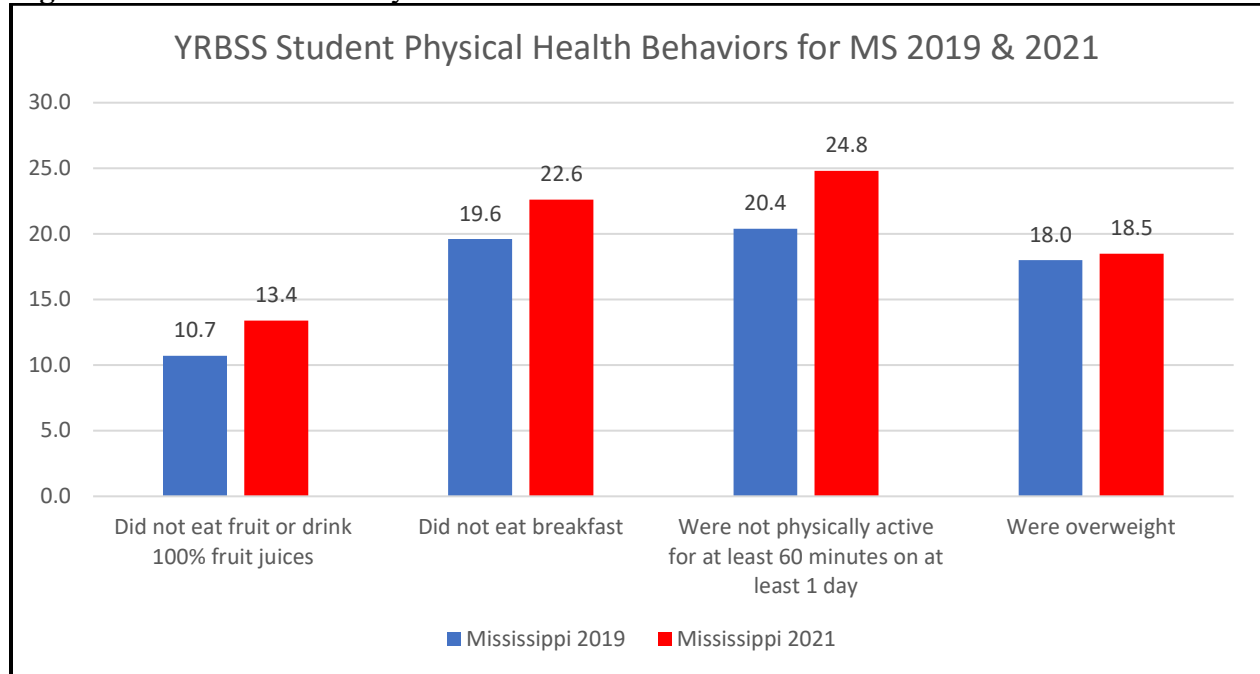
The YRBSS survey targets high school students and can be sorted by individual states for specific years. The survey is anonymous and no identifying variables are reported. As related to this study, the time period for which results are being reported include the years 2019 and 2021 (CDC, 2023). The survey questions chosen for analysis in this study were based upon key themes identified during the literature review. Those themes were then matched to YRBSS survey questions similar in content, and were then grouped into two categories: (1) mental health-related and (2) physical health-related. An analysis of that survey data was conducted using bar charts to compare certain physical and mental health criteria before and after the pandemic.

Findings

The following section presents findings from a comparison of 2019 and 2021 YRBSS youth responses to selected physical and mental health questions. In the physical health

categories, there were increases among Mississippi youth from 2019 to 2021 regarding less healthy activities (Figure 1). Those findings suggest COVID-19 may have influenced behaviors that contributed to increases related to obesity, poor diet, and reduced exercise issues in Mississippi.

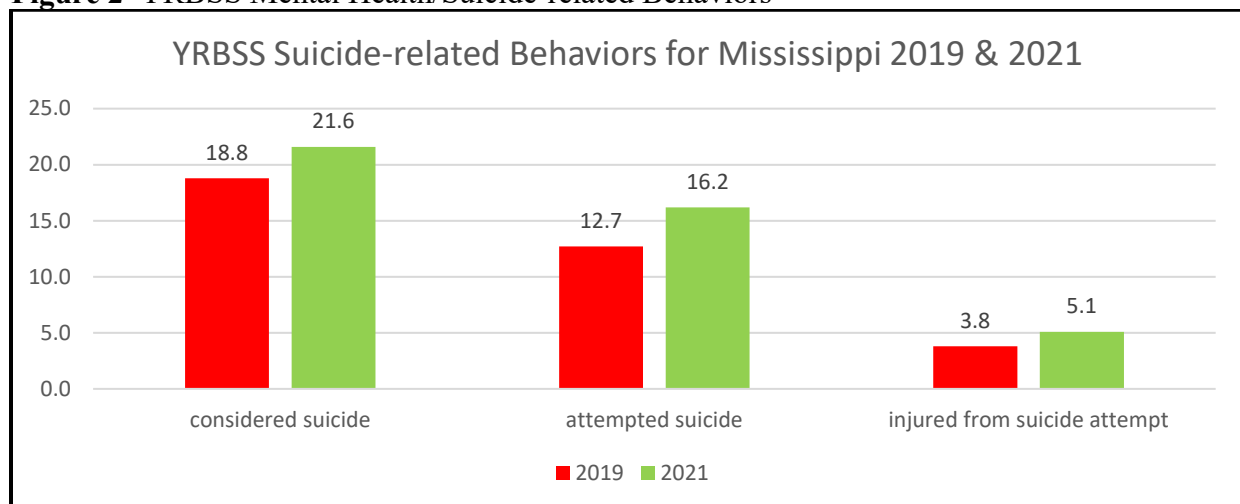
Figure 1 YRBSS Student Physical Health Behaviors



The following is a listing of percentage **increases** in the above behaviors from 2019 and 2021 --- Did not eat fruit or drink 100% fruit juices (2.7%); Did not eat breakfast (3.0%); Were not physically active for at least 60 minutes on at least 1 day (4.4%); and Were overweight (0.5%).

In the mental health category, an analysis of the data shows increases from 2019 to 2021 in responses related to Suicide (Figure 2). Those percentage **increases** were: Considered Suicide (2.8%); Attempted Suicide (3.5%); and Injured from Suicide attempt (1.3%). Responses indicate

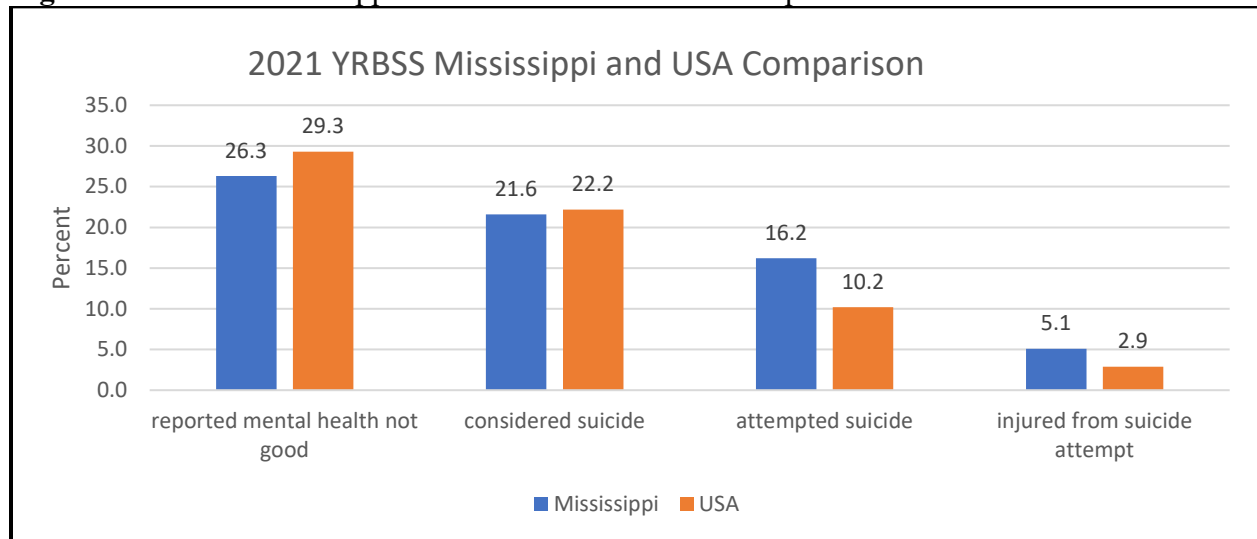
Figure 2 YRBSS Mental Health/Suicide-related Behaviors



how COVID-19 may have contributed to mental health issues that resulted in suicidal thoughts and actions in Mississippi.

Figure 3 shows the results of a comparison between Mississippi and the United States overall regarding mental health status and suicide-related criteria. Results show Mississippi had a 3.0% lower percentage for “Reported Mental Health not Good”, and 0.6% for “Considered Suicide”. However, Mississippi had a higher percentage for questions related to “Attempted Suicide” (6.0%) and Injured from Suicide Attempt” (by 2.2%). Responses suggest COVID-19 may have contributed to mental health issues that resulted in suicidal thoughts and actions.

Figure 3 YRBSS Mississippi and USA Mental Health Comparisons



Discussion

While trying to assess the direct impact of COVID-19 is complex, multifaceted, and difficult to measure, a review of the research literature indicated some youth were impacted in terms of school performance, physical and mental health, social skills, family support, and overall development. What can be ascertained from this study’s findings is that for many youths in Mississippi public schools during the pandemic, their overall physical and mental health did exhibit various rates of declined. Some of those specific measures identified included reduced physical activity, poor diets, increased obesity, and increased levels of anxiety, depression, and other mental health issues.

One of this study’s more significant research findings involved the impact of technology on the mental health status of youth during the pandemic. The use of social media and similar technology to replace in-person interactions often led to “social connectiveness issues” among youth during the pandemic (Jones, 2022). There was evidence of negative health consequences arising from social media use that included acts of bullying/cyberbullying. Those consequences often led to increased levels of anxiety, depressive symptoms, poor self-worth, social isolation, and suicide attempts (Cowie, 2021). A review of YRBSS data for Mississippi indicated that these

physical and mental health issues were also being experienced by many youths completing the survey.

Approximately four years after the height of the pandemic, it is still difficult to determine what will be the long-term mental and physical effects of COVID-19 on youth in Mississippi public schools. Parents, educators, and other officials working with youth will need to remain vigilant in identifying and recording those effects on youth, and then be prepared to take actions needed to mitigate those effects. With Mississippi having a history of challenges impeding its educational progress such as high levels of poverty, low school funding, and teacher shortages, adequately addressing the current and future issues flowing from the pandemic needs to be prioritized for the future growth of the state.

Conclusions

The impact of COVID-19 has added to many pre-existing challenges facing youth in Mississippi public schools. Some of those pre-existing challenges include wide-spread poverty, limited school funding, language barriers, and limited availability of technology in certain geographic areas. Those challenges, coupled with the challenges identified in this research study related to academic learning losses, ongoing physical and mental health setbacks, all create tremendous pressure on parents, educators, community residents, businesses, and policymakers to implement effective solutions. The short- and long-term impact of those challenges are still revealing themselves daily and often in an un-even manner --- that is, some students, communities, and school districts are experiencing more difficulty successfully adapting than others. The lessons learned from going through the COVID-19 pandemic provide a warning regarding how fragile our institutions, communities, students, and schools are to wide-spread disruptive events such as the COVID-19 pandemic.

The purpose of this research brief was to examine the possible impact of the COVID-19 pandemic on the mental and physical health of youth in Mississippi public schools. The goal was to provide information that can help educators, parents, and policymakers better understand the past, current, and potential future impacts of the virus. By doing so, it is hoped this information can lead to actions that help Mississippi public schools better prepare themselves to overcome any current and future challenges potentially impeding the healthy development of Mississippi youth and their communities. A big part of overcoming those challenges is recognizing some of the physical, mental, and cultural issues students and schools are facing as a result of the COVID-19 pandemic. This research brief identifies and discusses many of those issues. The next section provides recommendations that can assist in overcoming some of those issues and challenges.

Recommendations

The following are several recommendations for possibly addressing some of the short- and long-term challenges and effects of the COVID-19 pandemic on youth in Mississippi public schools. Those recommendations include:

- Educate students, families, and school officials regarding the physical, mental, and cultural challenges facing youth as a result of the pandemic.

- Provide more services promoting healthy student lifestyles and activities that are both technology and non-technology based.
- Improve access and insurance coverage for physical and mental health conditions arising from the pandemic.
- Increase access to physical and mental health care technicians and personnel specializing in working with youth.
- Provide more access to technology-related services that can help address geographic issues (e.g., urban versus rural areas); academic issues; physical and mental health issues; and social/cultural issues facing youth, their families, and schools.
- Provide mental health services to youth addressing “lack of social connectiveness issues” that contribute to increase levels of suicidal thoughts, actions, anxiety, and depression.

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