

Exploring the Effects of Lockdown on Youth during the Pandemic

A Literature Review and Survey Evaluation

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INTRODUCTION

Fiesta Schoolyards, a non-profit organization with the goal of transforming elementary school yards in Philadelphia, conducted a survey of parents and caregivers over an 8 week period in 2021 focusing on answering the following question: **How has the COVID-19 pandemic affected the mental and physical health of elementary-age children differently who live in a city, in the suburbs, or in a rural area?** The online survey was circulated to parents and caregivers of children aged 5 to 12 in the Greater Philadelphia area.

Fiesta Schoolyards was formed in 2018 to demonstrate the positive benefits and feasibility of implementing scalable, low-cost, and expedited playground improvements at school playgrounds across the District that tend to be characterized as large expanses of asphalt and little other play equipment. This survey will aid the work of Fiesta Schoolyards by identifying common physical and mental health issues experienced by the children of the communities they are working in, as well as addressing the concerns of parents and caretakers. This information can further be explored to identify the best methods to encourage active play in these communities.

This survey was created and distributed with help from the After School Activities Partnership, the Philadelphia Higher Education Network for Neighborhood Development, Public Citizens for Children and Youth, and Drexel University's Office of University and Community Partnerships.

LITERATURE REVIEW

Studies into how the Covid-19 pandemic has affected the mental health of children have been performed across the globe, in countries including Portugal, Italy, Spain, China, and the United States. Much like the survey prepared by Fiesta Schoolyards, researchers attempted to identify a relationship between the decline in mental health of children and the increased isolation necessary to stay safe.

One study performed in Europe (March 2021) asked parents about their children's coping strategies during the pandemic and compared those strategies to the child's mental health to see which coping skills were more effective at helping children get through the pandemic. Commonly used coping strategies included acceptance, collaborating with social activities such as drawings on windows or collective applause, ignoring the problem, highlighting the pros of being home, seeking comfort from others, and not showing concern for the issue. Emotional-oriented coping strategies were generally associated with a greater presence of anxious symptoms (mood, sleep, behavioral), while task-oriented and avoidance-oriented strategies were related to better

psychological adaptation. This study also found that children who were allowed to go outdoors for even a short amount of time were better adapted than others. These results provide insight into the coping skills that parents should promote during the COVID crisis and others like it in the future.

Another study in China (April 2021) investigated the relationship between parents and children. It was found that students who had poor relationships with parents did worse when studying from home and were more likely to go through depressive episodes. The paper recommends public health initiatives that focus on helping students adjust their study habits for at-home conditions and improve their relationships with their parents can help reduce depressive symptoms.

Using an approach similar to the one used by the Fiesta Schoolyards survey, a study in China (June 2020) asked parents to note observations about fatigue, aggression, appetite, physical activity, etc. regarding their children. The goal of the study was to identify ways to nurture resilience in children during this pandemic and other situations in the future that require increased isolation. The paper found that media entertainment, reading entertainment, and physical exercise were very effective in mitigating the negative mental health effects posed by the pandemic.

Conducted earlier in the pandemic (May 2020), a study in the United States asked parents how long they could continue social distancing practices before their child's mental health suffered, with 29% of parents saying their children are already experiencing harm to their emotional or mental health. It was noted that parents of children who were already experiencing harm to their mental health noted that separation from classmates and teachers was a major challenge. Another important observation made by this study found that parents without college degrees were more likely to report that their children were already experiencing mental health decline, which may be due to the fact that there are disproportionately high unemployment rates for those who have lower educational attainment.

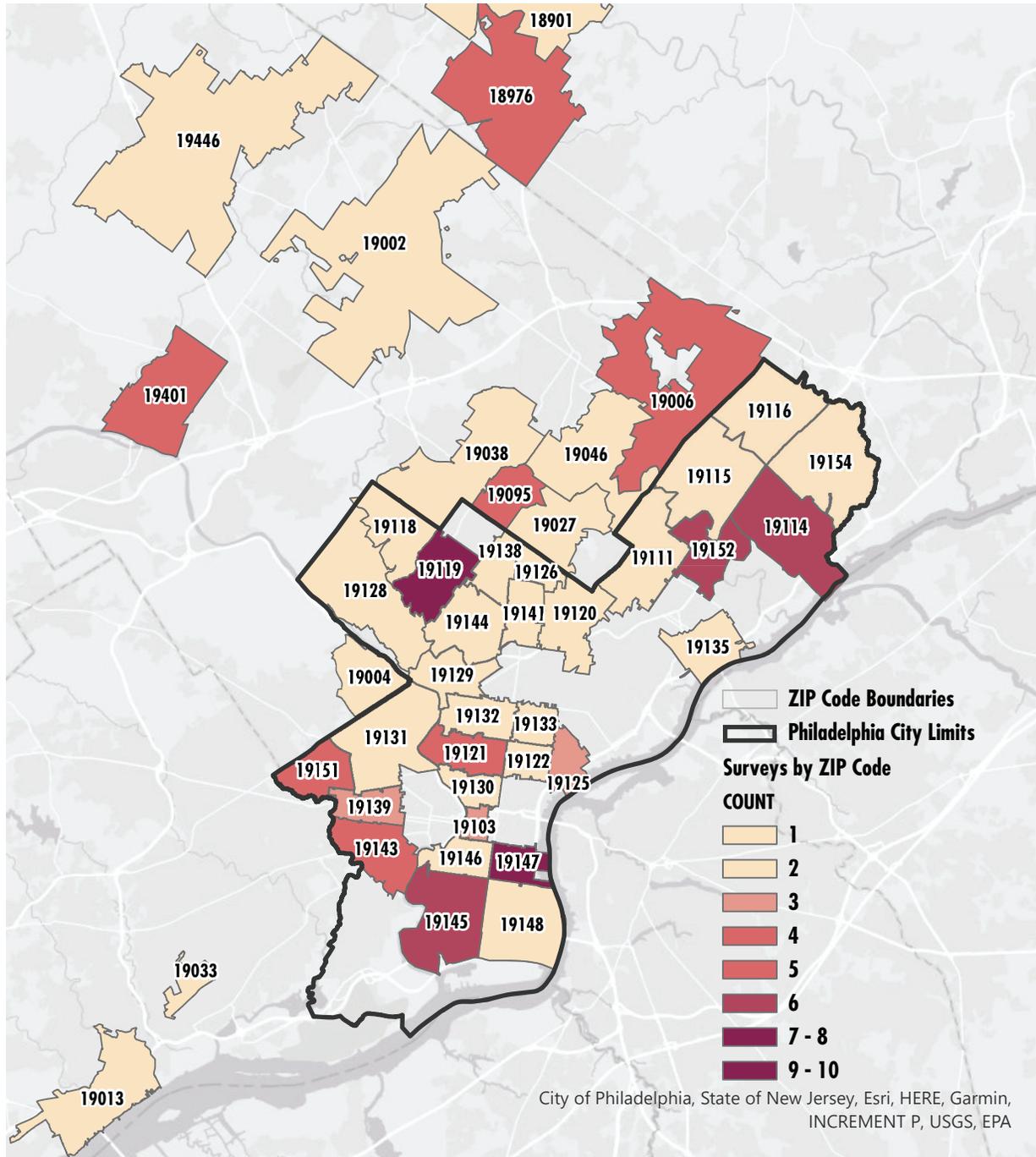
While each of these studies had a different focus and different outcomes, one thing remains the same. Each of these studies noted the importance of investigating vulnerable populations, during a crisis such as the COVID-19 pandemic in order to better understand how to help them. The mental health effects of the pandemic on children is still a growing research area and more work still needs to be done, however, it is becoming clearer that a focus on increased social interaction and physical activity can help reduce harm to mental health.

DEMOGRAPHICS ANALYSIS

Geospatial

The survey received 130 responses, however, after removing duplicate responses and responses from participants outside the area of interest (Greater Philadelphia area), 124 responses remained.

Approximately 63% of participants (n=74) provided a response to this question, resulting in participation in 46 different zip codes across Philadelphia and its surrounding counties. The top three represented zip codes are Bella Vista, Philadelphia (19147) with 8.4%, Mount Airy, Philadelphia (19119) with 6.72%, and Kingsessing, Philadelphia (19143) with 4.2%.



Median Household Income

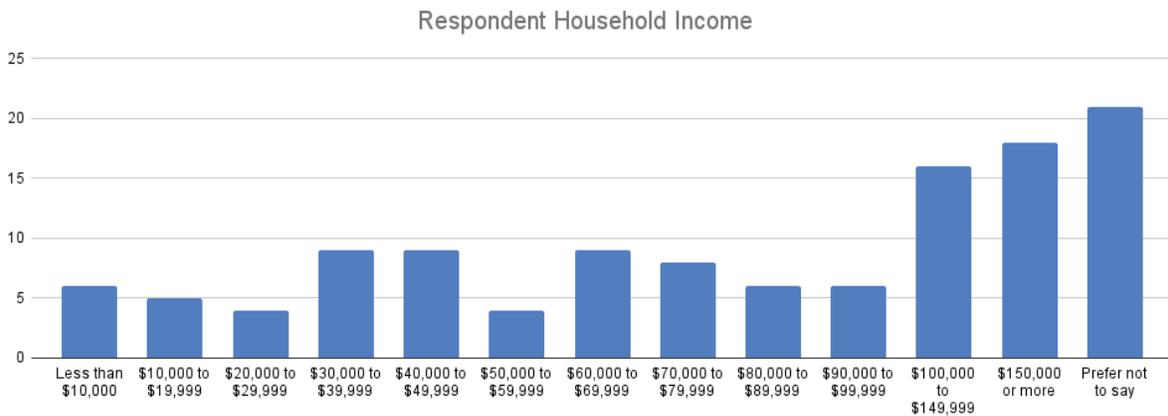
About 94% of participants provided a response (n= 118). The household income of participants ranged from \$10,000 to more than \$150,000, with the highest number of participants coming from households of \$150,000 or more.

The median household income in Philadelphia County is \$45,927. After comparing the median household income of each zip code against Philadelphia's, it was determined that approximately 67.4% of the zip codes in this survey are higher income neighborhoods. With respect to each zipcode's median household income, 76.4% of participants could be considered higher income.

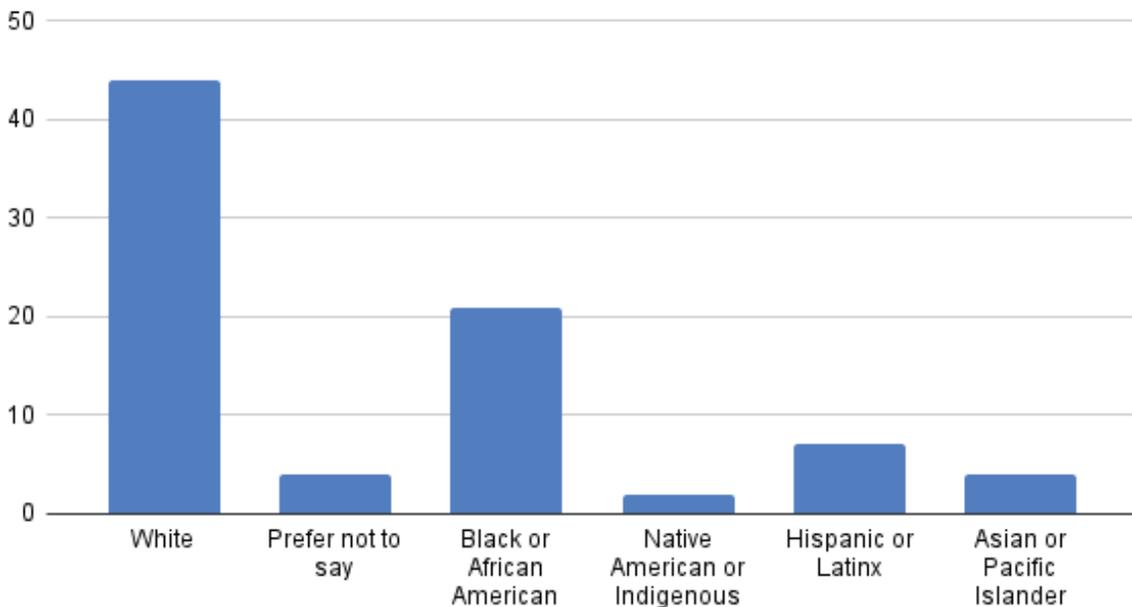
When comparing the responses of higher and lower income households, no significant differences in responses to survey questions was observed. However, of the 21.3% of participants who observed no positive physical or mental changes in their children, approximately 77% were from higher income households.

Race/Ethnicity

Approximately 66% of participants provided a response (n= 82). Those who identify as white comprised more than 50% of survey participants, while those identifying as Black or African-American made up about 25.6% of participants and those identifying as Hispanic or Latinx made up 8.5%.



Respondent's Race or Ethnicity

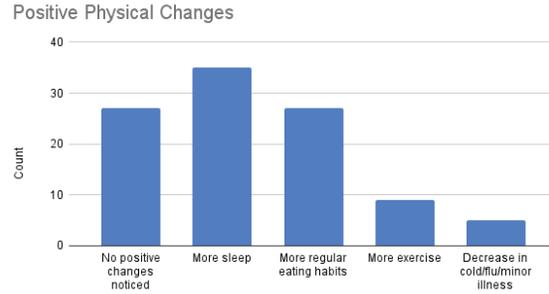


Physical and Mental Health

Positive Physical Changes

92% of participants provided a response to this question (n=115). The positive physical changes observed included more sleep, more regular eating habits, and more exercise, with more sleep being the highest observed behavior, as noted by 30.4% of participants. Due to a number of write-in responses, 'Decrease in cold/flu/minor illness' was an added category. While more positive changes were observed overall, 23.5% of participants stated that they observed no positive changes.

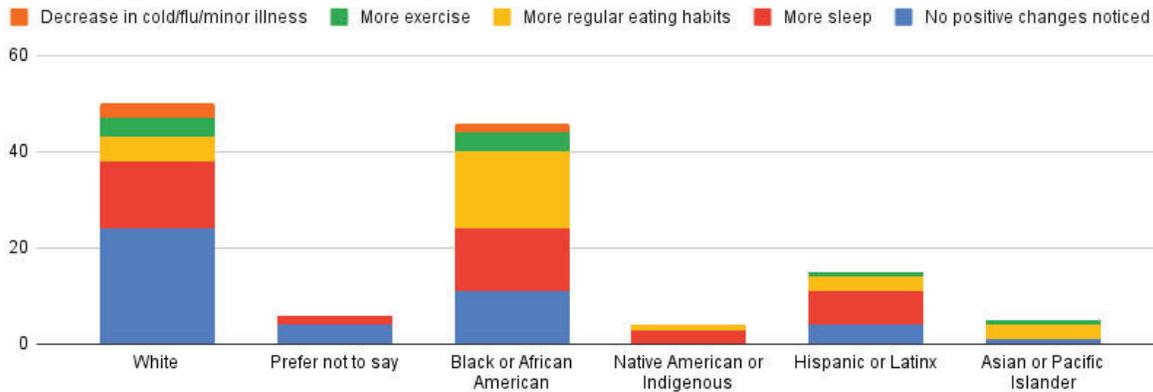
Evaluating the responses according to race/ethnicity and income bracket yielded some observable differences, but not many. When broken down by race/ethnicity, participants who identified as White noted no positive changes was the most observed behavior (48%), while those identifying as Black or African American and Asian or Pacific Islander noted more regular eating habits (34.8% and 60%) and those identifying as Native American or Indigenous and



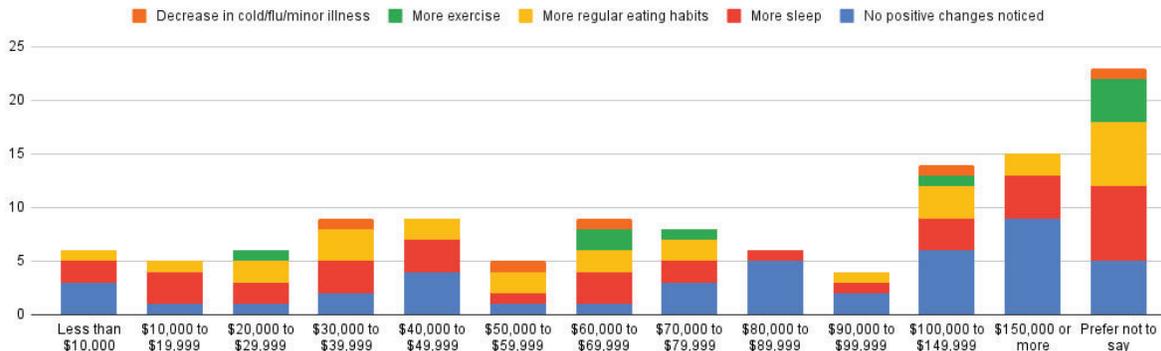
Hispanic or Latinx found more sleep to be the most observed positive physical change (75% and 46.7%).

When broken down by income bracket, all income brackets \$70,000 and above noted no positive physical changes as the most observed, while income brackets below \$70,000 were inconsistent. 34.5% of participants who identified an income below \$70,000 noted more sleep as the most observed positive change, with no positive changes and more regular eating habits tied at 26.5%

Positive Physical Changes by Race/Ethnicity



Positive Physical Changes by Median Household Income

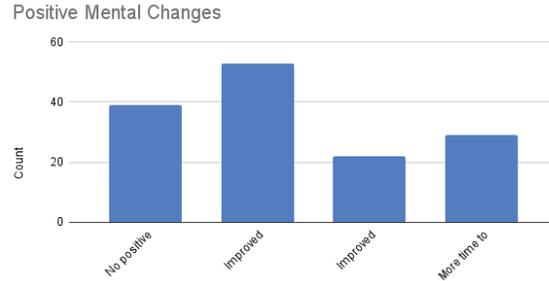


Positive Mental Changes

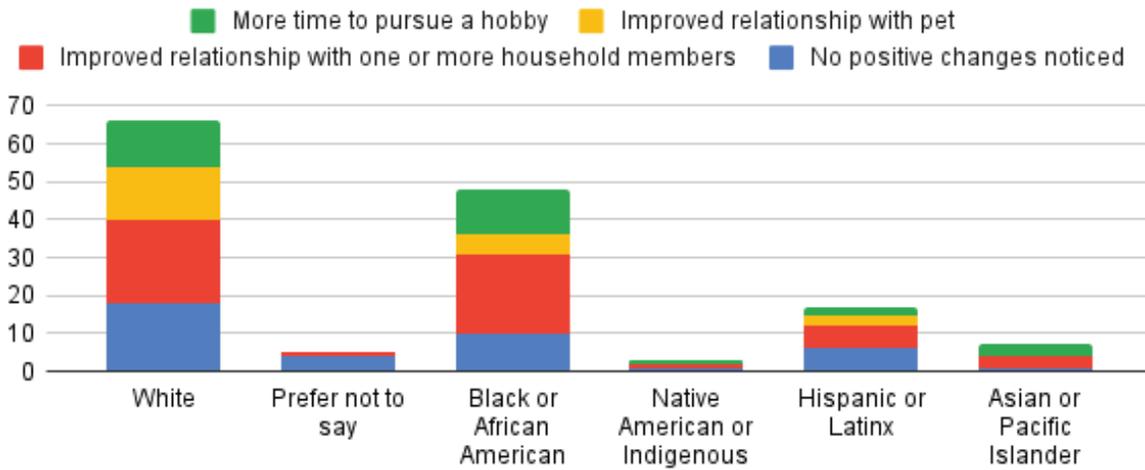
Approximately 94% of participants provided a response (n= 118). Of the positive mental changes observed, improved relationships with household members was the most commonly reported change (44.92%), however about 33% of participants noticed no positive changes.

When evaluated by race/ethnicity and income bracket, improved relationship with one or more household members was the most observed mental change by all racial demographics except those who prefer not to identify and by 8 out of 13 income brackets (61.5%), with no positive changes as the runner up.

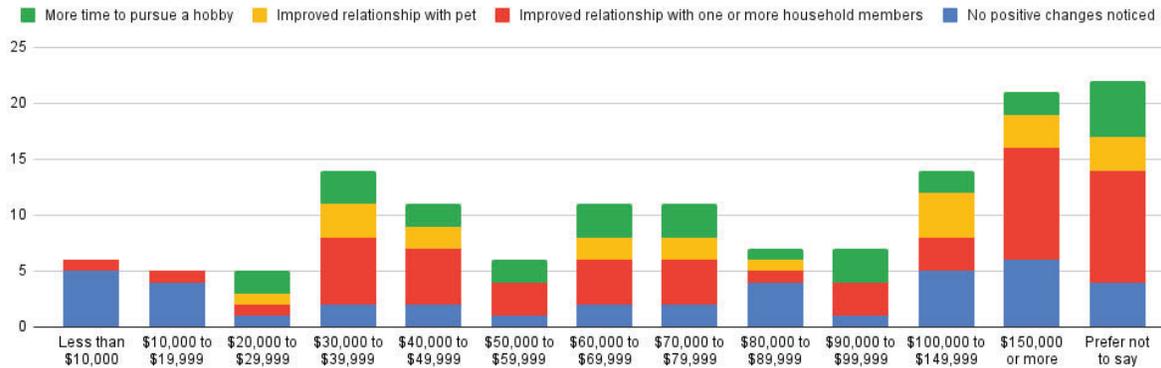
Those who identified a household income of \$30,000 or more showed more responses consisting of improved relationships with household members and pets, and more time to pursue hobbies.



Positive Mental Changes by Race/Ethnicity



Positive Mental Changes by Household Income

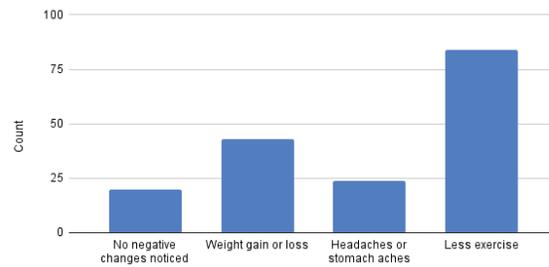


Negative Physical Changes

About 97% of participants provided responses to this question (n=121). The negative physical changes identified in this survey included weight gain or loss, headaches or stomach aches, and less exercise, with the number one observed change being less exercise (64.9% of responses).

When evaluated by race/ethnicity and income bracket, responses remained fairly consistent, with less exercise being observed as the most observed negative physical change.

Negative physical changes

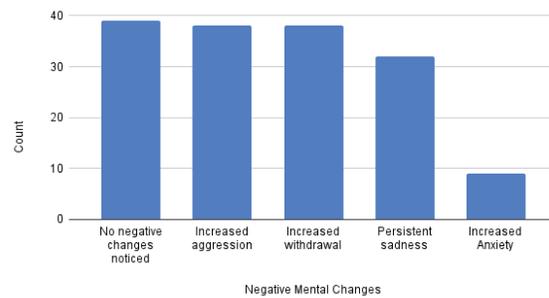


Negative Mental Changes

About 94% of participants provided a response to this question (n=118). Observance of negative mental changes was split between no negative changes noticed (33.05%), increased aggression (32.2%) and increased withdrawal (32.2%). A common write-in response from participants was an observed increase in anxiety.

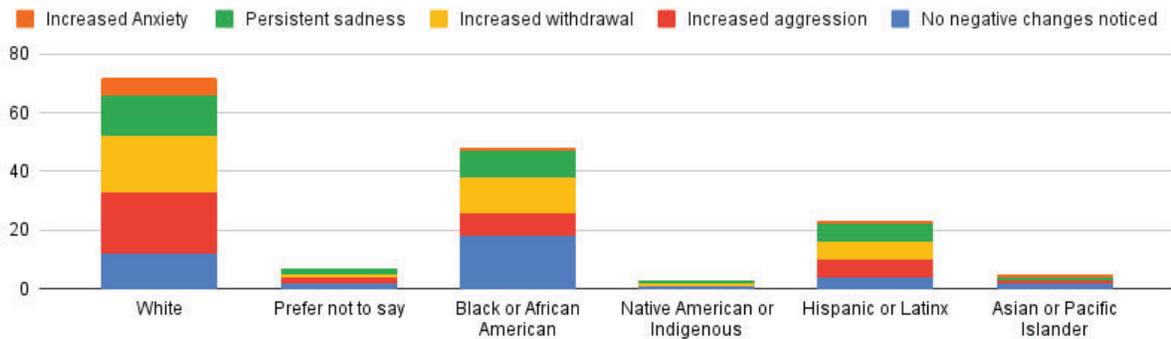
When broken down by race/ethnicity and income brackets, there were some disparities observed, but not many. According to the race/ethnicity breakdown, participants who identified as white, increased aggression was the most observed negative mental change (29.2%), while those who identified as Black or African American noted no negative changes (37.5%).

Negative Mental Changes

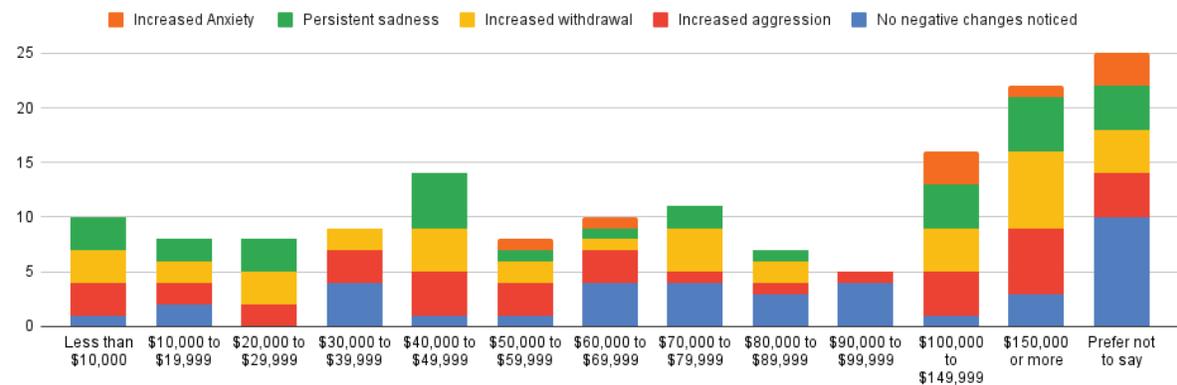


Similar to the original survey responses, when broken down by income bracket, the most observed negative mental changes were split between no negative changes noticed, increased aggression, and increased withdrawal.

Negative Mental Changes by Race/Ethnicity



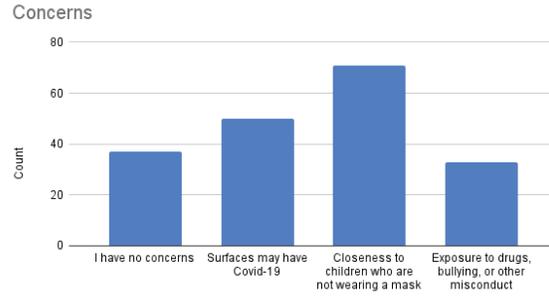
Negative Mental changes by Household Income



Concerns

About 97% of participants provided a response to this question (n=122). In regards to local playground use, most participants indicated they were concerned about lack of social distancing and other children not wearing masks (58.2%).

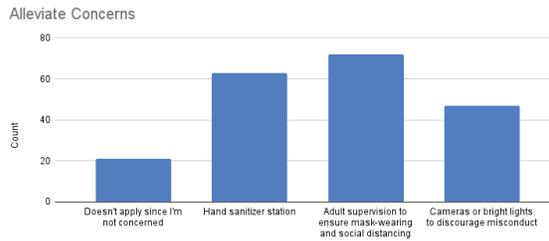
When evaluated by race/ethnicity and income bracket, responses remained fairly consistent for all demographics, with closeness to children not wearing masks was the most concerning for caretakers.



Alleviate Concerns

Approximately 92.3% of participants (n=120) provided responses to this question. Most participants indicated that Adult supervision to ensure Covid-19 safety precautions would alleviate concerns about their children using local playgrounds (35.47%).

When broken down by race/ethnicity and income brackets, responses remained consistent, with adult supervision most noted by caretakers to alleviate concerns.



DISCUSSION OF FINDINGS

The novel coronavirus has impacted people everywhere, regardless of age, race or income level. While this survey attempted to identify the differences in the physical and mental health impacts on children in city, suburban, and rural environments, a general consensus in survey responses was found instead.

General takeaways of the survey include:

- **69.4% of survey participants noticed less exercise as a negative physical change**
- **58.2% of participants are concerned about children who are not wearing masks or following appropriate social distancing measures in public play spaces**
- 30.4% of participants noticed more sleep as a positive physical change
- 44.9% of participants noticed improved relationships between their children and one or more household members as a positive mental change
- 32.2% of participants noticed increased aggression and withdrawal as a negative mental change
- 35.5% of participants would appreciate adult supervision in public play spaces to ensure children are following appropriate Covid-19 safety protocols.
- 67.4% of participants could be considered high income in comparison with Philadelphia's median household income

The survey results implied that caretakers of elementary aged children observed less exercise and increased aggression and withdrawal since the start of the pandemic. One may speculate that these negative physical and mental changes could be associated with lack of access to public play spaces, although this relationship was not robustly measured by this survey and may merit further research inquiry. The survey did support the notion that having provisions for increased adult supervision in ensuring children in play spaces followed proper safety precautions, as well as installing hand sanitizer stations, could help alleviate caregiver concerns associated with COVID-19. However, not all impacts of the pandemic have been bad. According to this survey, approximately 30% of respondents observed their children getting more sleep and almost 45% of respondents noticed improved relationships with one or more household members.

The survey results implied that almost 70% of parents or caregivers across all income levels and ethnicities observed less physical activity in their children during the lockdown, seemingly indicating that the geographic differences had less of an effect than what was presumed at the outset. Yet the reasons for the decrease in activity may not be the same. Although the survey did not ascertain the degree to which urban play spaces are accessible to parents' and caregivers' children compared to the accessibility of play spaces in suburban families, write-in responses from this survey suggest that some urban parents and caregivers don't feel comfortable with their children playing in the play spaces they do have access to. Parental concerns in accessing nearby play spaces articulated in the survey by urban caregivers go beyond their children not following proper social distancing measures during the pandemic and include bullying, unsafe playground conditions (such as finding heroin needles on the ground), or nearby crime. The relationship between the observed lesser degree of physical activity and a lack of access to public play spaces was not robustly measured by this survey and may merit further research inquiry.

The survey results also yielded little difference in the noticed mental changes between urban and suburban geographies, seemingly indicating that the geographic differences had less of an effect than what was presumed at the outset. Yet as noted above, the options available to families who live in urban or suburban neighborhoods may vary considerably. This assumption was based on the fact that, generally, suburban environments tend to have lower density residential areas with larger lot areas, providing front or back yards that would be more conducive to being safer play environments for children.

Other research studies in this space support this notion that differences between urban, suburban, and rural environments have less of an effect on a population's physical and mental wellbeing; rather, the quality, quantity, and access to parks and public spaces are the most important observed factors for generating positive physical and mental outcomes for a related population. A 2016 study conducted by researchers from Clemson University, Arizona State University, and the USDA Forest Service evaluated data from 44 US cities suggested the quantity, quality (measured by per capita spending on parks), and accessibility (measured by the overall percentage of the city's population within $\frac{1}{2}$ mile proximity to park spaces) were positively (though not significantly) associated with physical and community wellbeing (Larson, 2016).

While this study did not seem to indicate major disparities along household income, racial or ethnic background, or geographic location, many researchers suggest that access to quality park space is an environmental justice issue that could be exacerbated by one or more of these factors. A 2017 study from researchers out of the University of Illinois at Urbana-Champaign and California State University conducted on the walkable routes to park spaces in Los Angeles indicated that “low-income neighborhoods near parks have higher traffic volumes, fewer shade trees, and street environments that are less clean and well maintained compared to high-income areas and that similar disparities exist between ethnic minority and White communities,” surmising that “these inequities could deter low-income people of color, especially children, from visiting urban parks” (Rigolon, 2018).

These studies, along with others of their kind, stress the need for major considerations in park accessibility and quality for municipalities across the country, although more research is needed to better understand the full impact of park access and quality and other socio-economic factors of the populations they serve. A 2019 article from the Brookings Institution highlighted this unequal park access in the US’s 100 largest metropolitan areas, comparing factors of park access, poverty rates, and job densities, and calling for more research into the relationship:

“These examples only scratch the surface of how park access varies nationally, but the findings highlight the urgency to understand park access at the metropolitan scale. With suburbs once again growing faster than their city peers, and suburbs hosting the majority of people living in poverty, limited park access along the metropolitan fringe is a genuine barrier to household well-being for too many people. In response, metropolitan areas need regional plans to bring parks closer to all residents.” (Kane, 2019).

The results of this survey, along with some of the findings of other studies within this realm of research, suggest that the conditions of the pandemic exacerbated an already existing issue: many people, particularly those in socio-economically-vulnerable populations, don’t have access to quality public green spaces or spaces for play.

While research on the effects of the lockdown on the mental health of children and other vulnerable groups may still be emerging, the link between mental and physical health and access to recreational spaces has been well documented, and underscores the need to make it easier for people to use these spaces. Local initiatives that aim to improve access to these spaces or the quality of these places, such as the City of Philadelphia’s Rebuild by Design campaign or the Fiesta Schoolyards initiative, could have profound effects on the public health of the constituents who use those public assets. And although more research should be conducted to better ascertain the effects that quality park and play spaces can have on peoples’ mental and physical health, many of these initial findings seem to support the need for dedicating increased local, state, and federal resources to making these places better and more accessible to all.

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