

EXECUTIVE SUMMARY

# Shade Study 2024

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This pilot project investigates outdoor play in childcare settings within four Philadelphia’s environmental justice neighborhoods, Hunting Park, Strawberry Mansion, Cobbs Creek and Point Breeze. The study aims to address the impact of heat and limited shade on children and staff during the summer months, with a focus on the disparities exacerbated by climate change. Outdoor play is well-established as essential for children’s physical, mental, and emotional development, yet heat-exposed neighborhoods face barriers to safe and enjoyable outdoor play. The primary objective of this work was to determine if the provision of shade structures can increase outdoor playtime during hot months in childcare facilities within these neighborhoods.

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The study targeted facilities participating in the Women for a Healthy Environment's Healthy Childcare Champion program, offering them shade structures and thermometers for data collection. Findings reveal varied effects among the eight centers, with Center 1 showing a 54-minute playtime increase due to shade, while Centers 2, 3, and 8 experienced no noticeable changes due to less flexible scheduling. The presence of shade structures resulted in temperature decreases, with an average 14.2-minute playtime increase and a 5.96-degree temperature reduction across all centers. This data underscored the significance of shade structures in enhancing outdoor play and ensuring comfort for children and staff in urban areas facing heat-related challenges. The data collected in this pilot study forms a foundation for future research initiatives that aim to create more equitable and health-promoting outdoor environments for children in vulnerable communities.

## Based on the findings and conclusions of this study WHE make the following recommendations:

1. Set up shade structures early in the spring.
2. Check the Air Quality Index (AQI) daily to ensure safe outdoor air quality for children using AirNow.Gov.
3. Utilize surface temperature thermometers to record outdoor concrete temperatures.
4. If childcare schedule permits, be flexible with outdoor playtime to avoid high heat times.
5. Wear sun-protective clothing and accessories such as hats and sunglasses.
6. Use a screen with an SPF of 30 or higher.
7. Stay hydrated with water when outdoors.
8. During the planning of urban tree cover projects, the addition of shade structures must be included to provide immediate relief from excessive temperatures especially to protect young children in environmental justice neighborhoods.