

DISPARITIES IN PHYSICAL EDUCATION AND ACTIVITY IN NYC SCHOOLS: A DISTRICT-WIDE ASSESSMENT OF SOUTH BRONX ELEMENTARY SCHOOLS

Emily Oppenheimer, MS₁; Charmaine Ruddock, MS₁; Emma Rodgers, MS₁; Neil Calman, MD, FAAFP₁
(1) The Institute for Family Health/Bronx Health REACH



BACKGROUND

- 43% of Bronx elementary school students are overweight or obese, higher than all other boroughs.
- Equitable school physical activity programs and facilities could help reduce the disparity in childhood obesity.
- In spring 2015, Bronx Health REACH (BHR) conducted a district-wide assessment of physical activity (PA) spaces and physical education (PE) instruction in 24 of New York City's South Bronx District 9 elementary schools to better understand student experiences being active during the day.

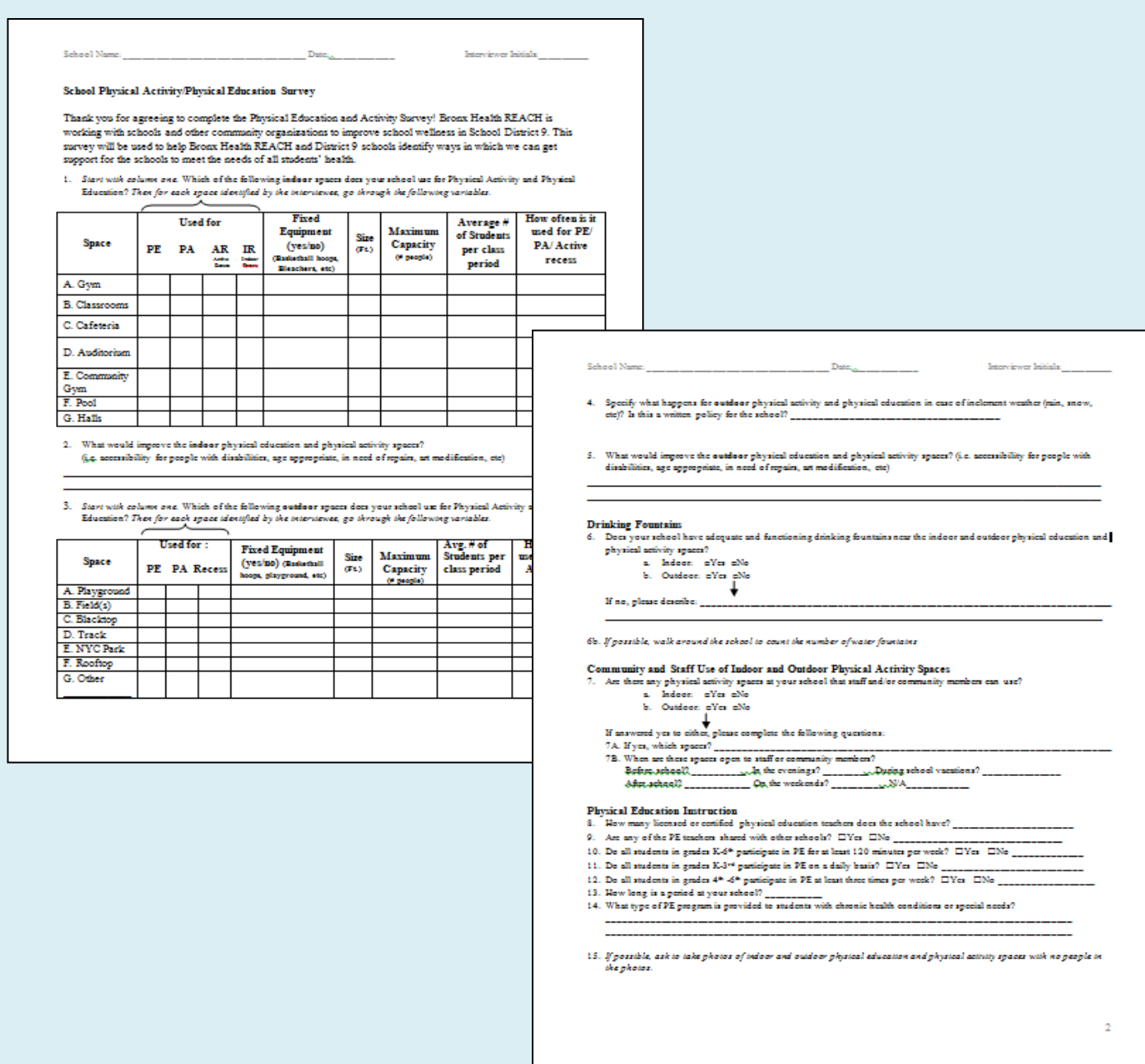
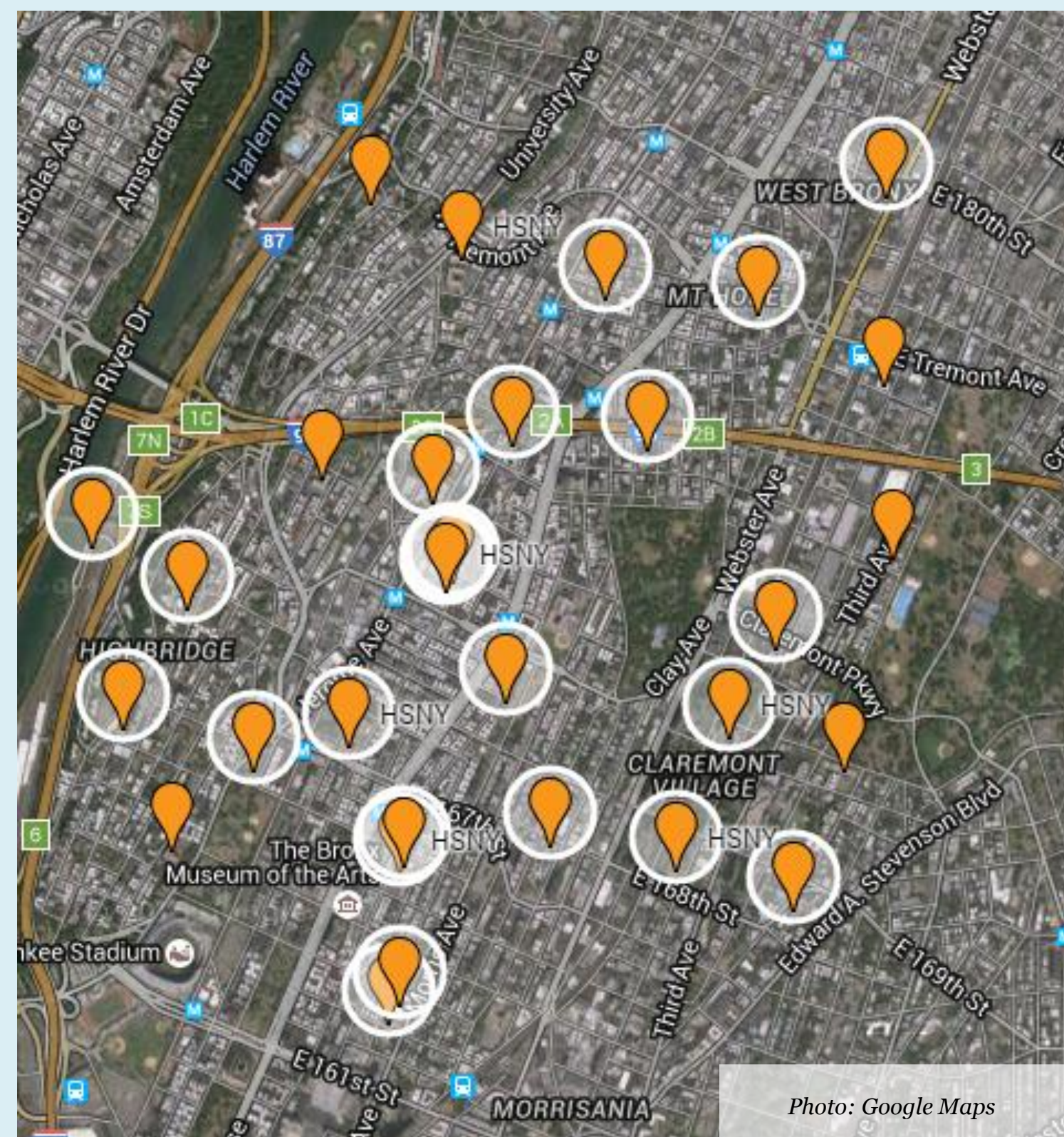
OBJECTIVES

The assessment aimed to better understand barriers and develop solutions for increasing PA/PE instruction and improve facilities in School District 9 elementary schools.

METHODS

Bronx School District 9 was selected for the assessment, because of poor health outcomes and past work with these schools.

The assessment of 24 schools involved in-person surveys with PE teachers, principals and other school staff knowledgeable about PA/PE.

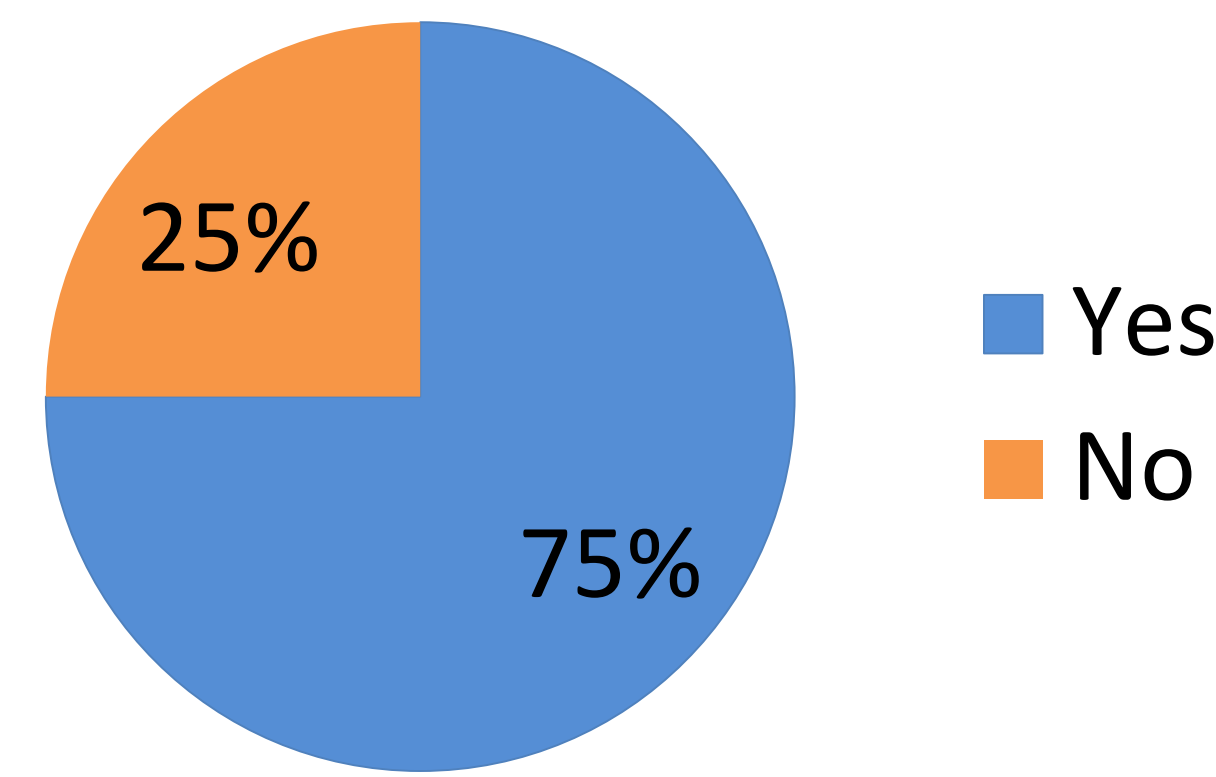


The survey instrument evaluated the indoor/outdoor spaces and PA/PE available to students.

Observational data on indoor and outdoor PA/PE spaces was collected with photographs.

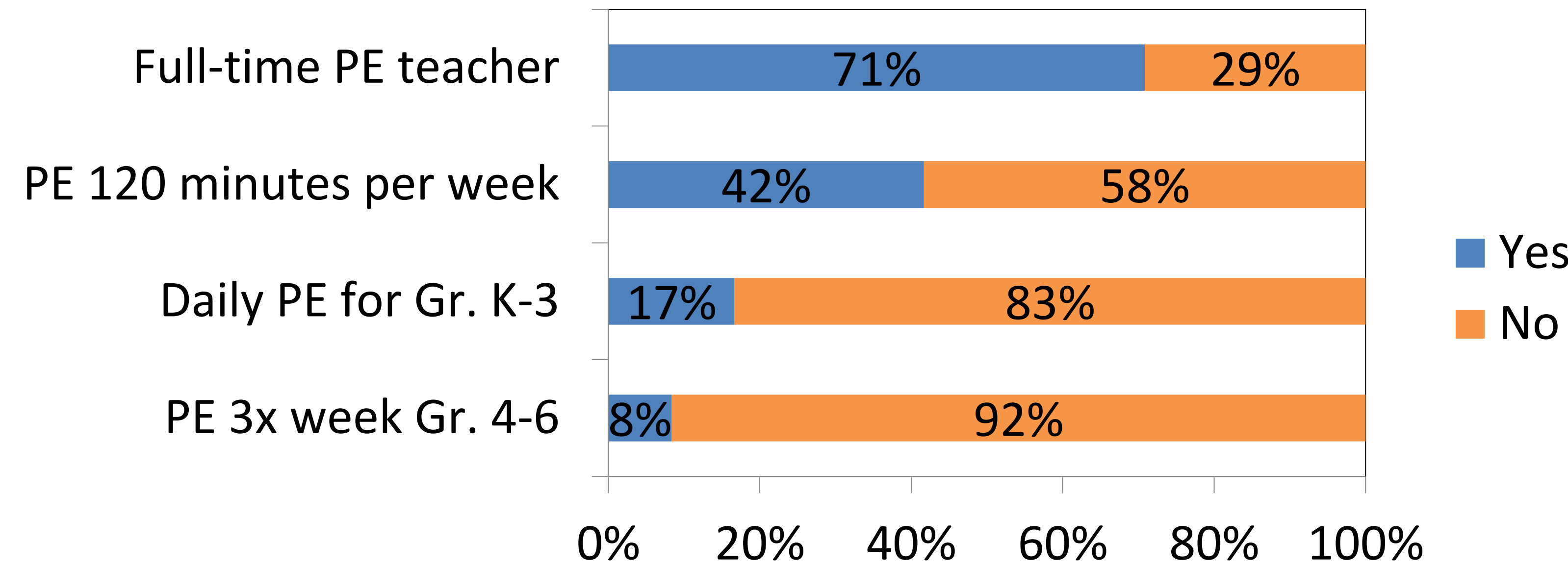
RESULTS

Space: Is there an area inside or outside for students to be active?



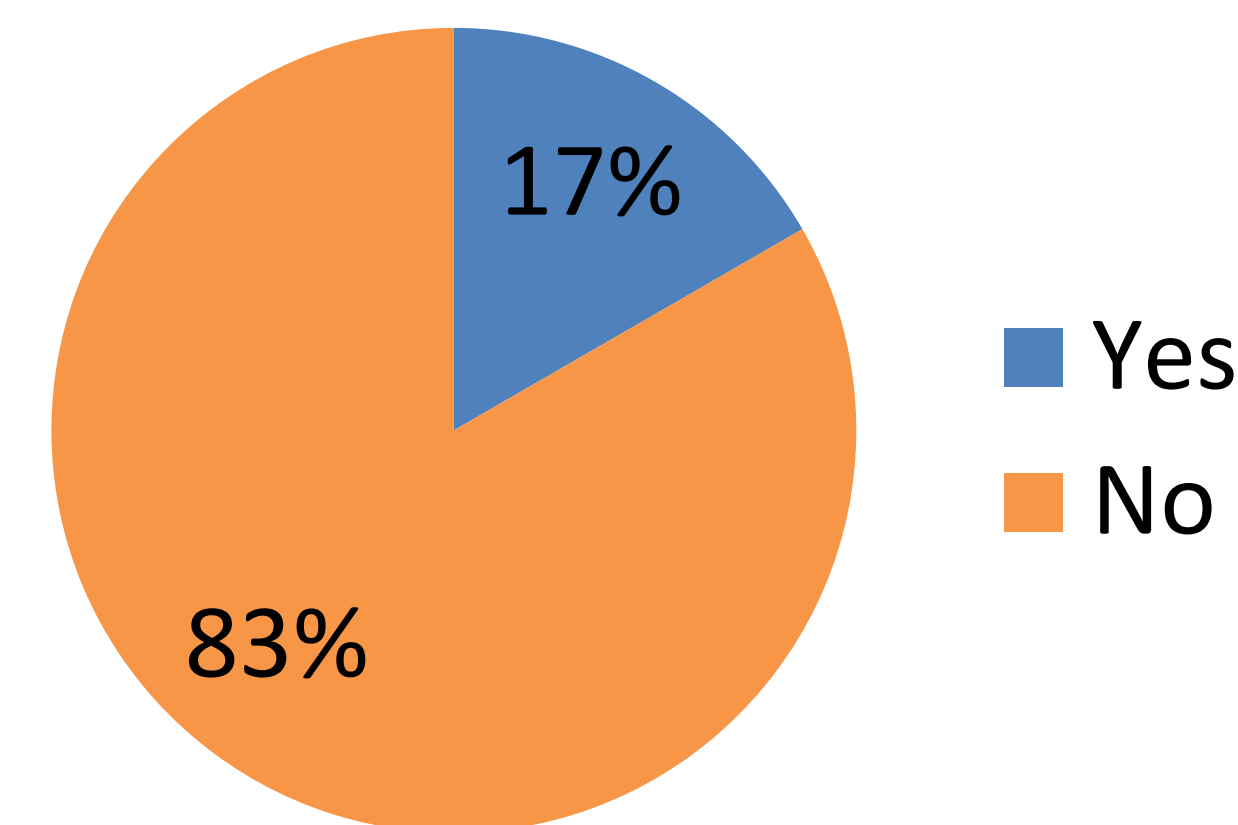
- 18 of the 24 schools (75%) have a gym space that can be used for PE or other indoor physical activities.
- The remaining 6 schools (25%) are dependent on alternative spaces like classrooms, hallways and cafeterias for indoor physical activities.
- Even schools with gymnasiums struggled with usability issues such as small size, shared-use and lack of appropriate equipment.
- 4 schools, or 16% have no functioning playground. Many described outdoor spaces limited by size, vandalism, no engaging ground markings or games and no equipment for students to play on.

Physical Education Class: Do students get physical education?



- 7 out of 24 schools (29%) lacked a full-time certified PE teacher.
- 10 out of 24 (42%) schools reported that students grades K-6 complete the New York State recommended 120 minutes of physical education weekly.
- 4 out of 24 schools (17%) had the resources to provide PE to students grades K-3 daily.
- 2 out of 24 schools (8%) reported PE at least 3 times per week for grades 4-6.

Water: Do students drink enough water during the school day?



- 22 out of 24 schools (91%) have access to water fountains inside the school.
- 4 of the 24 (17%) have access to outdoor fountains.
- During interviews, schools expressed issues with existing fountains including: size, location, taste and cleanliness.
- In general, when students participate in outdoor physical activity, they don't drink water, because there is very limited access to water fountains outside.

Community-use: Can parents and other neighbors use the school space to be active after hours?

- 14 out of 24 schools (58%) had some kind of regularly shared community or staff use of indoor school space for physical activity. Many schools offered dance, aerobics, yoga and Zumba classes afterschool and on the weekends. One school offered family health and fitness activities.
- 4 out of 24 schools (16%) offered some kind of available outdoor-shared space to the broader community. Mostly, the track and playground areas were used for walking.

DISCUSSION

- Schools in more affluent neighborhoods are more likely to have indoor/outdoor spaces for physical activity/education and meet or exceed the recommended amount of PE.
- District 9 schools, located in the poorest congressional district in the country, rarely do.
- Reducing PE/PA disparities is important, because PE/PA improves students' health and academic performance.
- Elementary schools in District 9 would benefit from more Physical Education Programming, useable indoor spaces and additional outdoor spaces.
- Access to functional, clean, and appealing water is a resounding concern throughout District 9 Elementary Schools.
- Future research should consider qualitative data collection to provide additional in-depth information.

Study Limitations:

- Lack of capacity to perform an in-depth data analysis.
- Data was collected over a year long period, and does not capture a consistent moment in time.
- School experts in PA were designated by each school principal, and thus surveys were collected from a variety of sources.

SOLUTIONS



- BHR will collaborate with the NYC Departments of Health and Mental Hygiene and Education, and other school and community groups to address barriers and prioritize resources for PA/PE in individual schools, District 9 and other underserved school districts.
- BHR has met with, and will continue to work with the NYC Department of Education to better meet student needs in schools for PA spaces and PE.

REFERENCES

1. Childhood Obesity Facts. (2015). Retrieved December 02, 2016, from <http://www.cdc.gov/healthyschools/obesity/facts.htm>
2. Castelli, DM, et al. (2014). Active Education: Growing Evidence on Physical Activity and Academic Performance. Active Living Research.
3. NYC DOHMH. EpiData Brief. (2010). <http://www.nyc.gov/html/doh/downloads/pdf/epi/databrief1.pdf>
4. NYC DOE. (2016). Fitnessgram Data. Overweight and obesity in NYC public schools.
5. National Center for Education Statistics (2008). Schools and Staffing Survey. https://nces.ed.gov/surveys/sass/tables/sasso708_035_sis.asp
6. Ward, Diane. (2011, October). School Policies on Physical Education and Physical Activity. Active Living Research. <http://activelivingresearch.org/school-policies-physical-education-and-physical-activity>