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Shared use agreements between municipalities and public schools in the United States, 2014

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Abstract

Shared use agreements allow public use of school facilities during non-school hours. Such agreements can cover outdoor facilities alone or may be more comprehensive by also including indoor facilities. Our aim was to: 1) estimate the prevalence of shared use agreements and facility types covered among U.S. municipalities and 2) identify differences in prevalence by municipality characteristics. The 2014 National Survey of Community-based Policy and Environmental Supports for Healthy Eating and Active Living is a representative survey of US municipalities (n= 2029). Data were analyzed using survey weights to create national estimates. Logistic and multinomial regression models determined odds ratios adjusting for municipality characteristics. Among 1930 municipalities with a school, 41.6% had a shared use agreement as reported by a local official, 45.6% did not, and 12.8% did not know. Significant differences in prevalence existed by population size, rural/urban status, poverty prevalence, median education level, and census region; however, after adjustment for other municipality characteristics significant differences remained only by population size, median education level, and census region. Among municipalities with a shared use agreement, 59.6% covered both outdoor and indoor facilities, 5.5% covered indoor facilities only, and 34.9% covered outdoor facilities only. Opportunities exist to expand the use of shared use agreements particularly in municipalities with small populations, lower education levels, and in the South, and to promote more comprehensive shared use agreements that include both indoor and outdoor facilities.

Keywords

School; Community; Policy; Shared use

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1. Introduction

Being physically active is one of the most important steps that people of all ages can take to improve their health (U.S. Department of Health and Human Services, 2008). Despite the many benefits of physical activity, only one-half of all U.S. adults and about one-quarter of high school students meet the current guideline for aerobic physical activity (Blackwell et al., 2014; Centers for Disease Control and Prevention, 2014). One known barrier to physical activity is lack of access to facilities and places to be physically active (Bauman et al., 2012; Sallis et al., 2000; Trost et al., 2002). Public schools are located in nearly all communities and often have appropriate recreational facilities that can be shared with community members (Evenson et al., 2010; Vincent, 2010). Shared use agreements are policies that allow public use of school facilities during non-school hours. Shared use agreement is a broadly used term which can also be called a joint use agreement, community use agreement, or joint use partnership (Vincent, 2014; Spengler, 2012). While the meaning of such terminology can vary particularly by discipline (Vincent, 2014), we use these terms interchangeably in reference to non-school entities using school facilities and grounds. Such policies take advantage of existing infrastructure (Vincent, 2010; Young et al., 2014; Filardo et al., 2010) and are known to increase physical activity levels of children and adolescents in those communities (Durant et al., 2009; Farley et al., 2007; Lafleur et al., 2013; Slater et al., 2013). In addition, shared use agreements may help remediate disparities in access to recreational facilities (Taylor and Lou, 2011). This is particularly important since children of racial and ethnic minorities and lower income groups are more likely to be overweight or obese (Miech et al., 2006; Centers for Disease Control and Prevention, 2009) and live in communities that lack features that support physical activity (Babey et al., 2008; Gordon-Larsen et al., 2006; Moore et al., 2008).

Shared use can occur through informal arrangements or may involve a formal contract between two government entities or a government entity and a private party (Vincent, 2010; Young et al., 2014). Such agreements can vary from including only outdoor school facilities to including indoor facilities or both (Vincent, 2010). Agreements that cover outdoor facilities only are more common than those that include indoor facilities, perhaps in part due to the more informal nature of opening access to outdoor facilities, the types of activities undertaken in outdoor facilities compared to indoor facilities, and additional issues of cost and liability with indoor facilities (Vincent, 2010, 2014; Chace and Vilvens, 2015; Kanters et al., 2014a). However, inclusion of indoor facilities can be an important component of shared use agreements as it increases the degree and variety of accessible recreational facilities, particularly for communities in inclement weather climates or in areas where few public facilities are available. Shared use of indoor facilities may also be an important consideration for bricks-and-mortar projects when building or renovating school facilities (Vincent, 2014).

Given the benefits associated with shared use agreements, several professional and public health organizations recommend their implementation (Young et al., 2014; HealthyPeople.gov; National Physical Activity Plan Alliance; White House Task Force on Childhood Obesity; Council on Sports, M., Fitness, and H. Council on School, 2006; Institute of Medicine, 2012). Despite this, few studies have examined the prevalence of

shared use agreements at the municipal level or the types of facilities covered by these agreements (Vincent, 2014; Everett Jones and Wendel, 2015; Chriqui et al., 2012). In addition, little is known about the municipality characteristics associated with the presence of shared use agreements and agreements that include indoor facilities. A previous survey of school district officials found that joint use agreements are less common in districts that were rural, small, and located in the South (Everett Jones and Wendel, 2015). Such information at the municipal level would assist with planning public health efforts to promote the use and breadth of these agreements in cities and municipalities. In addition, more local level data can help identify important variation in the adoption of shared use agreements. For example, a previous study in North Carolina identified that 88.9% of school principals reported that their school had a shared use agreement (Kanters et al., 2014a). Such data may help practitioners identify locally relevant best practices in promoting and adopting shared use agreements. Schools or school districts are essential stakeholders in shared use agreements. However, municipalities are also commonly partners in these agreements (Chriqui et al., 2012). Municipalities can utilize shared use agreements to increase access to low- or no-cost recreational facilities for community members.

The objective of this study was twofold. The first aim was to estimate the prevalence of shared use agreements and inclusion of indoor facilities, outdoor facilities, or both among U.S. municipalities with a school. The second aim was to identify differences in prevalence by municipality characteristics.

2. Methods

2.1. National Survey of Community-based Policy and Environmental Supports for Healthy Eating and Active Living (CBS HEAL)

2.1.1. Sample—CBS HEAL was conducted by the Centers for Disease Control and Prevention from May through September 2014. The sample pool of potential respondents consisted of 4484 municipalities from all 50 states and was based on the 2007 Census of Governments (COG) files which list municipalities and townships by state (U.S. Census Bureau, 2007). In states where there is geographic overlap between municipal and town or township levels of government, the eligible sample pool was modified and townships were excluded. Municipalities with populations of 1000 or less were excluded from the survey because a pilot survey found that small communities were less likely to have policies and practices that support healthy eating and active living. Sampling was stratified by region and by percent of area urbanized (the 30th percen-tile of urbanized area to total area in a municipality) and sorted by population size with a fixed sampling interval to create a nationally representative sample of municipalities. Observations were assigned sample weights that account for unequal probabilities of selection and varying rates of non-response.

The primary respondent for the survey was the city or town manager, planner, or person with similar responsibilities. Respondents were encouraged to ask for assistance in completing the survey if needed from other municipal officials such as a tax office or procurement department representative, a park and recreation department representative, or a human resources representative. This data collection was deemed exempt from institutional review

because of the public nature of the data being collected. Respondents were given a unique identifier to enable them to complete the survey through a secure website and were also provided with the option of completing a paper based version of the survey. A total of 2029 surveys were returned, with a response rate of 45%. Non-respondents did not differ significantly from respondents by population size or rural/urban status, although by region the highest response rates were among municipalities in the West and lowest among municipalities in the Northeast. Municipalities that reported not having a school (n = 99) were excluded to focus on accessibility of shared use facilities within municipalities that have a school, resulting in a final study sample of 1930.

2.1.2. Shared use questions—Questions about shared use agreements were asked during the second module of the survey titled “The Built Environment and Policies That Support Physical Activity.” This section begins with the following introductory statement: “The next questions ask about policies or standards that support the physical activity of your community's residents, even if the policy or standard was passed by another level of government (such as a regional transportation planning authority). You may find it helpful to consult with a representative in either the parks and recreation department or transportation department if you cannot answer a question.” To assess the presence of shared use agreements, local officials were asked: “Has your local government adopted a joint or shared-use agreement or a memorandum of understanding with any school that allows the public to use school recreational facilities (for example, gymnasiums, athletic fields, or playgrounds) during non-school hours?” Response options included yes; no; our municipality does not have schools in our jurisdiction; or don't know. Those who responded yes were then asked: “Who is your joint use agreement with?” Response options to this question were local school district or board; individual school; other; or do not know. These same respondents were then asked: “What school recreational facilities are covered by the joint or shared use agreement or a memorandum of understanding?” Response options were outdoor facilities only; indoor facilities only; outdoor and indoor facilities; or do not know. Respondents who selected “do not know” for any of the three questions were categorized as “do not know” overall, since complete responses were considered necessary for sufficient awareness of shared use agreements in their municipality.

2.1.3. Community demographic characteristics—Urban/rural status was based on the percent of the population in an incorporated place that live in an urbanized area based on the 2010 U.S. Census Urban Area to Place Relationship File (U.S. Census Bureau, 2010) and the criterion for categorizing places as urban or rural was urban (>50% urban) and rural (≤50% urban). Median education level (i.e., high school graduate, college graduate) and poverty (i.e., ≥20% or <20% of population below poverty level)) (U.S. Census Bureau) and race/ethnicity (i.e., ≤50% or >50% non-Hispanic white) distributions for each municipality were estimated from the 2009–2013 American Community Survey (U.S. Census Bureau).

2.2. Statistical analyses

Prevalence among U.S. municipalities of having shared use agreements and associated 95% confidence intervals (CI) was calculated overall and by municipality characteristics (i.e., population size, rural/urban status, census region, median education level, poverty

prevalence, and racial/ethnic composition). Orthogonal polynomial contrasts and pairwise *t*-tests were used to identify significant trends and differences by characteristics. A logistic regression analysis adjusting for other municipality characteristics was conducted to examine the association of municipality characteristics with the presence of a shared use agreement; the referent group was those who reported not having a shared use agreement or did not know whether one existed.

Among local officials who reported having a shared use agreement, prevalence of shared use agreements that cover different types of school recreational facilities were calculated overall and by municipality characteristics (i.e., population size, rural/urban status, census region, median education level, poverty prevalence, and racial/ethnic composition). Chi-square tests were conducted to examine associations between municipality characteristics and facility types covered. For municipality characteristics with significant associations, orthogonal polynomial contrasts and pairwise *t*-tests were used to identify significant trends and differences.

Among all municipalities with a school, a multinomial regression analysis adjusting for municipality characteristics was conducted to examine factors associated with the presence of a shared use agreement that covers indoor facilities or only outdoor facilities compared to the absence of a shared use agreement.

3. Results

The majority of municipalities with a school in our study sample had a population size between 2500 and 49,999, were urban, had a median education level of some college or higher, with <20% of the population below the poverty level and >50% non-Hispanic white (Table 1).

3.1. Presence of shared use agreements

Among local municipalities in the United States with a school in their jurisdiction, 41.6% of local officials reported having a shared use agreement with a school, while 45.6% reported no agreement, and 12.8% did not know (Table 2). Prevalence of reporting a shared use agreement increased as population size increased from 28.2% in municipalities with <2500 persons to 71.3% in municipalities with ≥50,000 persons (p-value for linear trend <0.001) and this association with population size remained significant (p-value for linear trend <0.001) after controlling for other municipality characteristics. Prevalence of reported shared use agreements was higher among urban municipalities (45.9%) compared to rural municipalities (28.9%), although this difference was not significant when models were adjusted for other municipality characteristics. Prevalence was lowest in the South (34.5%) and highest in the West (58.6%). Prevalence of shared use agreements was also higher among municipalities with higher median education level and lower poverty prevalence, although only the difference by median education level remained significant after the model adjusted for other municipality characteristics. No difference in prevalence was found in municipalities by percentage of non-Hispanic Whites.

With regard to the shared use agreement partner, 89.5% of municipalities that reported having a shared use agreement were partnered with the local school district or board and 9.0% were with an individual school (data not shown). The prevalence of either partner type did not differ significantly by municipality characteristics.

3.2. Facilities covered by shared use agreements among municipalities with agreements

Among municipalities that reported having a shared use agreement, 94.4% covered outdoor facilities and 65.1% covered indoor facilities. As shown in Fig. 1, 59.6% had agreements that covered both outdoor and indoor facilities, 5.5% covered indoor facilities only, and 34.9% covered outdoor facilities only. The prevalence of shared use agreements covering both outdoor and indoor facilities increased as population size increased, was higher among urban municipalities compared to rural municipalities, lowest in the South, and higher among municipalities with higher median education level.

3.3. Combined presence and types of facilities covered

Of municipalities with a school in their jurisdiction, 14.7% had a shared use agreement with a school that included outdoor facilities only and 27.5% had a shared use agreement that covered any indoor facility (Table 3). Prevalence of having a shared use agreement that included outdoor facilities alone did not differ significantly by municipality characteristics. Prevalence of a shared use agreement that covered any indoor facility increased as population size increased and was higher among urban municipalities compared to rural municipalities. This prevalence was lowest in the South (18.5%) and highest in the West (44.7%).

Odds of reporting a shared use agreement including any indoor facility and odds of reporting a shared use agreement including an outdoor facility only (compared to not reporting a shared use agreement) increased as population size increased. Also, significant differences in the odds of reporting a shared use agreement including any indoor facility (compared to no shared use agreement) were observed by median education (AOR = 0.55 for median education level of high school graduate or lower compared to some college or higher) level and census region (AOR = 2.80 for the West, AOR = 1.92 for the Northeast, and AOR = 1.74 for the Midwest census regions when compared to the South).

4. Discussion

In 2014, 4 in 10 U.S. municipalities had a shared use agreement as reported by a local official. The prevalence of shared use agreements was lowest in rural municipalities, municipalities in the South, and municipalities with a higher poverty prevalence, lower median education, and smaller population size. Although the majority (65.1%) of municipalities with a shared use agreement covered indoor facilities, this only corresponds to 27.5% of all municipalities. Opportunities exist to expand the use of shared use agreements particularly among municipalities with small populations, lower education levels, and that are located in the South where access to other recreational facilities is known to be limited (Gordon-Larsen et al., 2006). This may help address disparities in access to recreational facilities and physical activity levels often seen in these communities. There is

also a need to promote more comprehensive shared use agreements that include both indoor and outdoor facilities.

Understanding and addressing barriers to adopting such agreements could help improve the coverage of these agreements. Several barriers have been identified (Young et al., 2014), including lack of community interest (Kanters et al., 2014a; Spengler et al., 2012), inadequate capacity of stakeholder agencies (Filardo et al., 2010; Spengler et al., 2012; Maddock et al., 2008), insufficient partnerships and dialogue between agencies (Vincent, 2014; Spengler et al., 2012), poor design of school facilities (Young et al., 2014), liability concerns (Spengler et al., 2012; Baker and Masud, 2010; Change Lab Solutions; Spengler et al., 2011), and costs associated with greater facility utilization (Vincent, 2010, 2014; Chriqui et al., 2012; Spengler et al., 2012; Kanters et al., 2014b). Promotional materials and resources can help municipalities understand the benefits and how to train staff to develop and implement shared use agreements (Change Lab Solutions). The1 in 10 respondents who reported not knowing about the presence of a shared use agreement may also demonstrate a need for improved communication and information sharing among municipal staff to increase awareness of such policies in their communities. Encouraging interagency collaboration and building relationships could help develop partnerships essential to the adoption of shared use agreements (Vincent, 2010, 2014; Filardo et al., 2010). Policies that require school districts to provide shared use and authorize school districts to enter into shared use agreements can help facilitate their adoption (Young et al., 2014). Providing incentives for school boards to consider shared use when renovating or building schools may help bricks-and-mortar projects incorporate design features that facilitate share use (Young et al., 2014). To address liability concerns, laws that provide legal protection for schools and school districts allowing public use and requiring proof of insurance for groups using school property may alleviate these concerns (Vincent, 2010, 2014; Young et al., 2014; Baker and Masud, 2010; Change Lab Solutions). Although concerns of cost may often be exaggerated (Kanters et al., 2014b), shared use agreements can clearly articulate cost responsibilities to make the agreement more appealing to all parties (Vincent, 2010, 2014; Chriqui et al., 2012; Kanters et al., 2014b).

Beyond simply adopting a shared use agreement, the types of facilities covered by an agreement vary. At their most basic, shared use agreements may allow public use of outdoor facilities. This is consistent with our finding of >95% of reported agreements covering outdoor facilities. More comprehensive agreements also include indoor facilities by increasing the number and type of facilities available for public use. This can be an important resource for communities in inclement weather climates or in areas where few public facilities are available. In addition, shared use may be an important consideration for bricks-and-mortar projects in planning the design of school infrastructure that is more conducive to shared use (Vincent, 2014). Since fewer municipalities with a shared use agreement reported covering indoor facilities compared to outdoor facilities, the inclusion of indoor facilities in shared use agreements likely faces additional barriers than outdoor facilities alone. For example, additional issues of cost, supervision, and safety may be associated with the shared use of indoor facilities in contrast to outdoor facilities alone. Compared to municipalities without a shared use agreement, the odds of having an agreement and one that includes indoor facilities was significantly lower for municipalities

that had a smaller population size, lower median education level, and were located in the South. Further research could help identify the barriers specific to including indoor facilities as part of the shared use agreement and identify specific approaches to overcome them, particularly for these identified community types.

Previous studies have examined the use of shared used agreements from the perspective of schools and school districts, the other partner in most shared used agreements. The 2012 School Health Policies and Practices Study (SHPPS) found that among a representative sample of school districts in the U.S. 61.6% reported having a joint use agreement (Everett Jones and Wendel, 2015). In terms of facilities covered by the agreement as identified by the SHPPS, an estimated 82.1% applied to indoor facilities and 84.3% applied to outdoor facilities (Everett Jones and Wendel, 2015). Prevalence estimates from SHPPS may not be directly comparable to estimates from CBS HEAL as there is not a one to match between municipalities and school districts. In addition, the SHPPS study question included shared use agreements with non-municipal agencies, making it broader and more inclusive than the CBS HEAL survey which was limited to municipalities. The 2014 SHPPS, a nationally representative survey of schools, identified that among schools with a joint use agreement about 40%had agreements with a municipal agency (31.6% were with a local parks or recreational department and 9.0% were with a local library system) (Centers for Disease Control and Prevention).

Our findings suggest that adoption of shared use agreements in general and those specifically covering indoor facilities varies by municipality population size, region, and median education level. These findings extend previous research identifying disparities in the adoption of shared use agreements and access to facilities for physical activity. For example, the SHPPS found that joint use agreements are less common in districts that were rural, small, and located in the South. Previous studies have reported that rural, nonwhite, and lower-income communities often lack community recreational facilities (Babey et al., 2008; Powell et al., 2006). Similarly, adults who are of lower income tend to be less active (HealthyPeople.gov). Promoting the adoption of shared use agreements, and encouraging the inclusion of outdoor and indoor facilities, may help address some of these disparities. In particular, our findings identified that municipalities with small populations, lower education levels, and that are located in the South are less likely to have shared use agreements. This presents an opportunity to target shared use agreements in these communities and potentially increase access to physical activity facilities within them. Such increases in access to physical activity facilities may be particularly impactful since studies have found that access to recreational facilities is less common in lower-income and racial and ethnic minority communities (Gordon-Larsen et al., 2006; Moore et al., 2008). In addition, focusing efforts to increase adoption of shared use agreements in the South may help overcome existing disparities in physical activity levels (Centers for Disease Control and Prevention, 2013) in this region. However, it should also be noted that previous research on access to recreational facility and disparities has demonstrated mixed results. For example, low-income and/or high-percent minority neighborhoods have been shown to have lesser (Moore et al., 2008; Jones et al., 2015), greater (Wen et al., 2013; Vaughan et al., 2013), or similar (Timperio et al., 2008) access to parks than their counterpart neighborhoods. Given this lack of consistency of evidence regarding disparities in access to recreational facilities, the impact

of shared use agreements should be closely evaluated with particular attention paid to the role these agreements can play in addressing disparities in access. Community-based studies of shared use agreements may be particularly useful in identifying the impact of shared use agreements on disparities. In addition, future research should investigate whether barriers to the adoption and implementation of shared use agreements play different roles by region and other sociodemographic characteristics to help develop effective strategies to overcome them.

4.1. Study limitations and strengths

Our study has some limitations. First, the CBS HEAL survey was designed to exclude unincorporated areas from the initial sample selection, as well as municipalities with populations of less than one-thousand. This limits the generalizability of our findings to incorporated municipalities with populations greater than one-thousand. Second, the CBS HEAL survey data are self-reported by a target respondent, such as the city manager or an individual of similar title, who may not be as familiar with policies concerning schools as they are with other policies. Although respondents were instructed to consult with a representative if they could not answer a question, it is unknown how many respondents did this and for what type of information. Third, the response rate could have resulted in response bias. Fourth, the survey may not have captured data on informal shared use agreements. Finally, the survey only collected information on the adoption of shared use agreements and not the range and scope of implementation of these agreements, which is an important area for additional study.

Despite these limitations, our study has several strengths. To our knowledge, no other study has estimated the prevalence of shared use agreements using a national sample of municipalities nor has any study provided national estimates of shared use agreements across various municipality characteristics. In addition, our study identified the types of facilities covered by existing shared use agreements, and was able to provide national estimates of covering indoor and outdoor facilities across various municipality characteristics.

5. Conclusion

In 2014, 4 in 10 municipalities in the U.S. reported having a shared use agreement, with a lower prevalence among municipalities with small populations, lower education levels, and that are located in the South. Moreover, approximately 1 in 4 municipalities had a shared use agreement that covered indoor facilities. Opportunities exist to expand the adoption of shared use agreements particularly among municipalities with identified characteristics, and to promote more comprehensive shared use agreements that include both indoor and outdoor facilities.

References

Babey SH, et al. Physical activity among adolescents. When do parks matter? Am J Prev Med. 2008; 34(4):345–348. [PubMed: 18374249]

Baker T, Masud H. Liability risks for after-hours use of public school property to reduce obesity: a 50-state survey. J Sch Health. 2010; 80(10):508–513. [PubMed: 20840661]

Bauman AE, et al. Correlates of physical activity: why are some people physically active and others not? Lancet. 2012; 380(9838):258–271. [PubMed: 22818938]

Blackwell DL, Lucas JW, Clarke TC. Summary health statistics for U.S. adults: National Health Interview Survey, 2012. Vital Health Stat. 2014; 10

Centers for Disease Control and Prevention. Obesity prevalence among low-income, preschool-aged children—United States, 1998–2008. Morb Mortal Wkly Rep. 2009; 58(28):769–773.

Centers for Disease Control and Prevention. Adult participation in aerobic and muscle-strengthening physical activities—United States, 2011. MMWR Morb Mortal Wkly Rep. 2013; 62(17):326–330. [PubMed: 23636025]

Centers for Disease Control and Prevention. Youth risk behavior surveillance — United States, 2013. MMWR Morb Mortal Wkly Rep. 2014; 63(Suppl 4):1–168. [PubMed: 24402465]

Centers for Disease Control and Prevention, d. [cited 2016 February 4, 2016] Results from the school health policies and practices study 2014. available from http://www.cdc.gov/healthyyouth/data/shpps/pdf/shpps-508-final_101315.pdf

Chace M, Vilvens H. Opening the doors for health: school administrators' perceived benefits, barriers and needs related to shared use of school recreational facilities for physical activity. J Phys Act Health. 2015; 12(7):1017–1022. [PubMed: 25153851]

Change Lab Solutions, d. [cited 2016 January 23] Opening school property after hours: a primer on liability. available from http://www.changelabsolutions.org/sites/default/files/Primer-on-Liability_FactSht_FINAL_20100820-rebranded-20131126.pdf

Change Lab Solutions, d. [cited 2016 January 23] Model joint use agreement resources. Available from http://www.changelabsolutions.org/publications/model-JUAs-national

Chriqui, JF., Schermbeck, R., Slater, SJ., Schneider, L., Barker, DC., Chaloupka, FJ. [cited 2015 September 2] Joint use agreements: creating opportunities for physical activity – a BTG research brief. 2012. Available from http://www.bridgingthegapresearch.org/_asset/gl9776/btg_joint_use_agreements-2-10-12.pdf

Council on Sports, M., Fitness, and H. Council on School. Active healthy living: prevention of childhood obesity through increased physical activity. Pediatrics. 2006; 117(5):1834–1842. [PubMed: 16651347]

Durant N, et al. Relation of school environment and policy to adolescent physical activity. J Sch Health. 2009; 79(4):153–159. quiz 205-6. [PubMed: 19292847]

Evenson KR, et al. National study of changes in community access to school physical activity facilities: the school health policies and programs study. J Phys Act Health. 2010; 7(Suppl 1):S20–S30. [PubMed: 20440007]

Everett Jones S, Wendel AM. Characteristics of joint use agreements in school districts in the United States: findings from the school health policies and practices study, 2012. Prev Chronic Dis. 2015; 12:E50. [PubMed: 25880769]

Farley TA, et al. Safe play spaces to promote physical activity in inner-city children: results from a pilot study of an environmental intervention. Am J Public Health. 2007; 97(9):1625–1631. [PubMed: 17666701]

Filardo M, et al. Joint Use of Public Schools: A Framework for a New Social Contract. 2010

Gordon-Larsen P, et al. Inequality in the built environment underlies key health disparities in physical activity and obesity. Pediatrics. 2006; 117(2):417–424. [PubMed: 16452361]

HealthyPeople.gov, d. [cited 2016 January 23] Physical activity. available from http://www.healthypeople.gov/2020/topics-objectives/topic/physical-activity

Institute of Medicine. Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation. Washington (DC): 2012.

Jones SA, et al. Disparities in physical activity resource availability in six US regions. Prev Med. 2015; 78:17–22. [PubMed: 26067479]

Kanters MA, et al. Afterschool shared use of public school facilities for physical activity in North Carolina. Prev Med. 2014a; 69(Suppl 1):S44–S48. [PubMed: 25451325]

Kanters MA, et al. Shared use of school facilities with community organizations and afterschool physical activity program participation: a cost-benefit assessment. J Sch Health. 2014b; 84(5):302–309. [PubMed: 24707924]

Lafleur M, et al. Increasing physical activity in under-resourced communities through school-based, joint-use agreements, Los Angeles County, 2010–2012. Prev Chronic Dis. 2013; 10:E89. [PubMed: 23721790]

Maddock J, et al. Increasing access to places for physical activity through a joint use agreement: a case study in urban. Honolulu Prev Chronic Dis. 2008; 5(3):A91. [PubMed: 18558041]

Miech RA, et al. Trends in the association of poverty with overweight among US adolescents, 1971–2004. JAMA. 2006; 295(20):2385–2393. [PubMed: 16720824]

Moore LV, et al. Availability of recreational resources in minority and low socio-economic status areas. Am J Prev Med. 2008; 34(1):16–22. [PubMed: 18083446]

National Physical Activity Plan Alliance, d. [cited 2016 January 23] National physical activity plan. Available from http://www.physicalactivityplan.org/index.php

Powell LM, et al. Availability of physical activity-related facilities and neighborhood demographic and socioeconomic characteristics: a national study. Am J Public Health. 2006; 96(9):1676–1680. [PubMed: 16873753]

Sallis JF, Prochaska JJ, Taylor WC. A review of correlates of physical activity of children and adolescents. Med Sci Sports Exerc. 2000; 32(5):963–975. [PubMed: 10795788]

Slater S, et al. Association Between Joint Use Agreements and Adolescent Physical Activity and Sedentary Behavior. 141st American Public Health Association Annual Meeting and Exposition. 2013

Spengler, JO. [cited 2016 July 28] Promoting Physical Activity Through the Shared Use of School and Community Recreational Resources. A Research Brief. 2012. available from: www.activelivingresearch.org

Spengler JO, Connaughton DP, Maddock JE. Liability concerns and shared use of school recreational facilities in underserved communities. Am J Prev Med. 2011; 41(4):415–420. [PubMed: 21961469]

Spengler JO, Ko YJ, Connaughton DP. Scale development: perceived barriers to public use of school recreational facilities. Am J Health Behav. 2012; 36(3):311–318. [PubMed: 22370433]

Taylor, W., Lou, D. A Research Synthesis. Active Living Research, A National Program of the Robert Wood Johnson Foundation; Princeton, NJ: 2011. Do all children have places to be active? Disparities in access to physical activity environments in racial and ethnic minority and lower-income communities.

Timperio A, et al. Features of public open spaces and physical activity among children: findings from the CLAN study. Prev Med. 2008; 47(5):514–518. [PubMed: 18718847]

Trost SG, et al. Correlates of adults' participation in physical activity: review and update. Med Sci Sports Exerc. 2002; 34(12):1996–2001. [PubMed: 12471307]

U.S. Census Bureau. [cited 2015 November 17] Census of governments. 2007. available from https://www.census.gov/govs/cog/historical_data_2007.html

U.S. Census Bureau. Urban area to place relationship file. 2010. Available from http://www2.census.gov/geo/docs/maps-data/data/rel/ua_place_rel_10.txt

U.S. Census ureau, d. [cited 2015 December 10] Poverty definitions. available from https://www.census.gov/hhes/www/poverty/methods/definitions.html

U.S. Census Bureau, d. [cited 2015 November 3] American FactFinder: data from American community survey 2009-2013 estimate. available from http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

U.S. Department of Health and Human Services, 2008. Physical Activity Guidelines for Americans. U.S. Government Printing Office; Washington, DC: 2008.

Vaughan KB, et al. Exploring the distribution of park availability, features, and quality across Kansas City, Missouri by income and race/ethnicity: an environmental justice investigation. Ann Behav Med. 2013; 45(Suppl 1):S28–S38. [PubMed: 23334757]

Vincent, JM. Partnerships for Joint Use: Expanding the Use of Public School Infrastructure to Benefit Students and Communities. University of California, Berkeley, Center for Cities and Schools; Berkeley (CA): 2010. p. 1-40.

Vincent JM. Joint use of public schools: a framework for promoting healthy communities. J Plan Educ Res. 2014; 34(2):153–168.

Wen M, et al. Spatial disparities in the distribution of parks and green spaces in the USA. Ann Behav Med. 2013; 45(Suppl 1):S18–S27. [PubMed: 23334758]

White House Task Force on Childhood Obesity, d. [cited 2016 January 23] Solving the problem of childhood obesity within a generation. available from http://www.letsmove.gov/sites/letsmove.gov/files/TaskForce_on_Childhood_Obesity_May2010_FullReport.pdf

Young DR, et al. Promoting physical activity through the shared use of school recreational spaces: a policy statement from the American Heart Association. Am J Public Health. 2014; 104(9):1583–1588. [PubMed: 24134355]

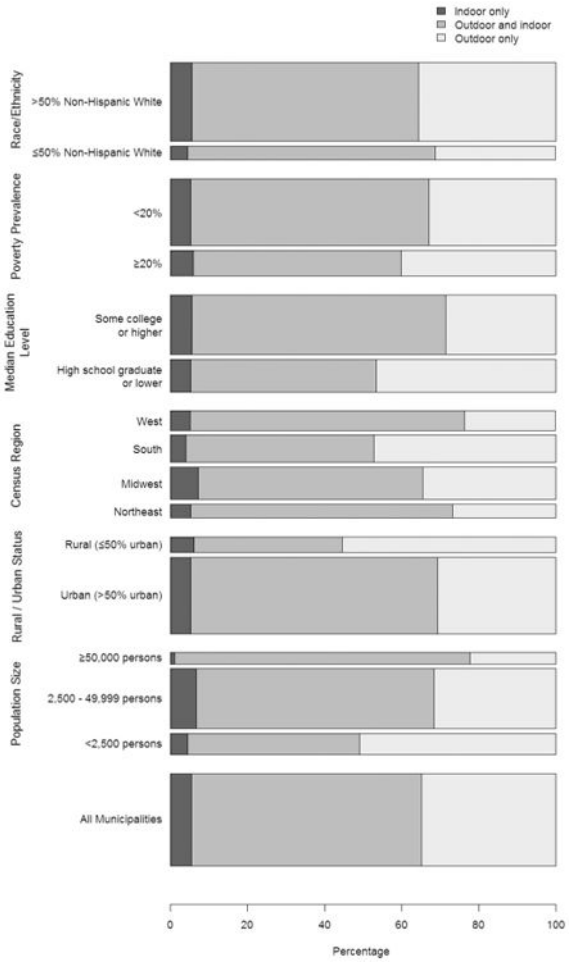

Fig 1.

Among municipalities with a reported shared use agreement, proportion by recreational facility type and municipality characteristics, CBS HEAL, United States, 2014[a]. [a]Excludes participants who responded “Don't Know” to either of “Who is your joint use or shared use agreement with?” or “What school recreational facilities are covered by the joint or shared use agreement or a memorandum of understanding?” (n = 45). Shared Use Agreement defined as a joint or shared use agreement or memorandum of understanding with any school allowing public use of school recreational facilities during non-school hours. Area of each bar represents weighted municipalities within subgroup.

Table 1

Municipality characteristics,[a] National Survey of Community-based Policy and Environmental Supports for Healthy Eating and Active Living (CBS HEAL), United States, 2014.

Municipality characteristics	Sample size	Weighted N	%
All municipalities	1930	9697	100.0
Population size			
<2500 persons	663	3259	33.6
2500–49,999 persons	1126	5746	59.3
≥50,000 persons	141	693	7.2
Rural/urban status			
Urban (>50% urban)	1419	7270	75.0
Rural (≤50% urban)	511	2427	25.0
Census region			
Northeast	222	1401	14.5
Midwest	717	3427	35.3
South	661	3430	35.4
West	330	1440	14.9
Median education level			
High school graduate or lower	854	4322	44.6
Some college or higher	1076	5376	55.4
Poverty prevalence			
≥20% of population below poverty level	589	2961	30.5
<20% of population below poverty level	1341	6737	69.5
Race/ethnicity			
≤50% non-Hispanic White	258	1303	13.4
>50% non-Hispanic White	1672	8394	86.6

[a]Excludes municipalities that reported not having a school in their jurisdiction(n= 99).

Table 2

Prevalence and adjusted odds ratio[a] of reported shared use agreements[b] among U.S. municipalities[c] by municipality characteristics, CBS HEAL, United States, 2014.

	Municipality report of shared use agreement						Adjusted odds of reporting a shared use agreement[a]	
	Yes		No		Do not know[d]			
Municipality characteristics	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**AOR**	**95% CI**
All municipalities (n = 1930)	41.6	(39.5–43.8)	45.6	(43.4–47.8)	12.8	(11.4–14.4)	–	
Population size								
<2500 persons (n = 663)	28.2	(24.9–31.8)	58.9	(55.1–62.6)	12.9	(10.5–15.7)	1.00	Referent
2500–49,999 persons (n = 1126)	45.6	(42.7–48.6)	41.7	(38.8–44.6)	12.7	(10.8–14.8)	1.97	(1.45–2.68)
≥50,000 persons (n = 141)	71.3	(63.2–78.2)	14.8	(9.8–21.7)	13.9	(9.1–20.7)	4.80	(2.94–7.83)
Rural/urban status								
Urban (>50% urban) (n = 511)	45.9	(43.3–48.5)	41.5	(38.9–44.0)	12.7	(11.0–14.5)	1.00	Referent
Rural (≤50% urban) (n = 1419)	28.9	(25.2–33.0)	57.9	(53.5–62.1)	13.2	(10.5–16.5)	1.04	(0.74–1.45)
Census region								
Northeast (n = 222)	42.0	(35.7–48.6)	45.5	(39.0–52.1)	12.5	(8.8–17.5)	1.36	(0.98–1.89)
Midwest (n = 717)	41.4	(37.9–45.0)	47.1	(43.6–50.7)	11.5	(9.3–14.0)	1.37	(1.08–1.74)
South (n = 661)	34.5	(31.0–38.3)	50.3	(46.6–54.1)	15.1	(12.6–18.1)	1.00	Referent
West (n = 330)	58.6	(53.3–63.8)	30.5	(25.8–35.6)	10.9	(8.0–14.8)	2.09	(1.57–2.79)
Median education level								
High school graduate or lower (n = 854)	32.9	(29.8–36.1)	53.3	(49.9–56.6)	13.8	(11.6–16.3)	0.67	(0.54–0.84)
Some college or higher (n = 1076)	48.6	(45.6–51.6)	39.4	(36.5–42.3)	12.0	(10.2–14.1)	1.00	Referent
Poverty prevalence								
≥20% of population below poverty level (n = 589)	37.4	(33.5–41.3)	48.6	(44.6–52.7)	14.0	(11.4–17.1)	1.03	(0.81–1.30)
<20% of population below poverty level (n = 1341)	43.5	(40.9–46.1)	44.2	(41.6–46.9)	12.3	(10.6–14.2)	1.00	Referent
Race/ethnicity								
≤50% non-Hispanic White (n = 258)	46.6	(40.6–52.7)	37.6	(31.9–43.7)	15.8	(11.8–20.8)	0.82	(0.60–1.11)
>50% non-Hispanic White (n = 1672)	40.8	(38.5–43.2)	46.8	(44.4–49.2)	12.4	(10.9–14.0)	1.00	Referent

Abbreviations: CI = confidence interval.

[a] Odds ratios adjusted for municipality characteristics including population size, rural/urban status, census region, median educational level, poverty prevalence, and racial/ethnic composition. Referent group was both those who reported not having a shared use agreement or did not know.

[b] Shared use agreement defined as a joint or shared use agreement or memorandum of understanding with any school allowing public use of school recreational facilities during non-school hours.

[c] Excludes municipalities that reported not having a school in their jurisdiction (n = 99).

[d] Participants who responded “Donot know”to any of“Has your local government adopted a joint or shared use agreement or memorandum of understanding with any school allowing public use of school recreational facilities during non-school hours?” or “Who is your joint use or shared use agreement with?” or “What school recreational facilities are covered by the joint or shared use agreement or a memorandum of understanding?”

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Table 3

Prevalence and adjusted odds[a] of reporting a shared use agreement[b] involving any indoor facility or outdoor facility only among U.S. municipalities, by municipality characteristics, CBS HEAL, United Sates, 2014.

	Overall prevalence of reporting				Adjusted odds ratio[a] from multinomial model (Referent group: no shared use agreement[c])			
	A shared use agreement including any indoor facility		A shared use agreement including outdoor facility only		Reporting a shared use agreement including any indoor facility[d]		Reporting a shared use agreement including outdoor facility only	
Municipality characteristics	**%**	**95% CI**	**%**	**95% CI**	**AOR**	**95% CI**	**AOR**	**95% CI**
All municipalities	27.5	(25.6–29.4)	14.7	(13.2–16.4)	–		–	
Population size								
<2500 persons	14.0	(11.6–16.9)	14.5	(12.0–17.4)	1.00	Referent	1.00	Referent
2500–49,999 persons	31.6	(29.0–34.4)	14.5	(12.6–16.7)	2.39	(1.62–3.52)	1.53	(1.02–2.28)
≥50,000 persons	56.0	(47.7–64.1)	17.3	(11.8–24.5)	6.65	(3.78–11.70)	3.55	(1.83–6.89)
Rural/urban status								
Urban (>50% urban)	32.2	(29.8–34.6)	14.3	(12.6–16.2)	1.00	Referent	1.00	Referent
Rural (≤50% urban)	13.3	(10.7–16.5)	16.0	(13.1–19.5)	0.87	(0.56–1.34)	1.25	(0.82–1.91)
Census region								
Northeast	31.6	(25.8–38.0)	11.2	(7.7–16.1)	1.92	(1.32–2.81)	0.78	(0.47–1.28)
Midwest	27.5	(24.4–30.8)	14.5	(12.1–17.2)	1.74	(1.31–2.33)	0.97	(0.70–1.33)
South	18.5	(15.8–21.6)	16.6	(14.0–19.7)	1.00	Referent	1.00	Referent
West	44.7	(39.5–50.1)	14.2	(10.8–18.4)	2.80	(2.01–3.90)	1.21	(0.81–1.83)
Median education level								
High school graduate or lower	17.9	(15.5–20.7)	15.6	(13.3–18.2)	0.55	(0.42–0.71)	0.97	(0.72–1.31)
Some college or higher	35.1	(32.3–38.0)	14.1	(12.1–16.3)	1.00	Referent	1.00	Referent
Poverty prevalence								
≥20% of population below poverty level	22.7	(19.5–26.2)	15.0	(12.3–18.1)	1.02	(0.77–1.34)	1.11	(0.81–1.52)
<20% of population below poverty level	29.6	(27.2–32.0)	14.6	(12.8–16.6)	1.00	Referent	1.00	Referent
Race/ethnicity								
≤50% non-Hispanic White	32.5	(27.0–38.4)	14.5	(10.7–19.4)	0.72	(0.50–1.02)	1.04	(0.69–1.56)
>50% non-Hispanic White	26.7	(24.7–28.8)	14.8	(13.1–16.6)	1.00	Referent	1.00	Referent

Abbreviations: CI = confidence interval.

[a]Odds ratios adjusted for municipality characteristics including population size, rural/urban status, region, median educational level, poverty prevalence, and racial/ethnic composition.

[b]Shared use agreement defined as a joint or shared use agreement or memorandum of understanding with any school allowing public use of school recreational facilities during non-school hours.

[c]"No shared use agreement" defined as those who reported not having a shared use agreement or memorandum of understanding, and those who responded "Do not know"to any of "Has your local government adopted a joint or shared use agreement or memorandum of understanding with any school allowing public use of school recreational facilities during non-school hours?" or "Who is your joint use or shared use agreement with?" or "What school recreational facilities are covered by the joint or shared use agreement or a memorandum of understanding?"

[d]"Any indoor facility" defined as those who reported "indoor facilities only" or "outdoor and indoor facilities" to the question "What school recreational facilities are covered by the joint or shared use agreement or a memorandum of understanding?"