Community Schools: a Public Health Opportunity to Reverse Urban Cycles of Disadvantage

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ABSTRACT *Community schools link students, families, and communities to educate children and strengthen neighborhoods. They have become a popular model for education in many US cities in part because they build on community assets and address multiple determinants of educational disadvantage. Since community schools seek to have an impact on populations, not just the children enrolled, they provide an opportunity to improve community health. Community schools influence the health and education of neighborhood residents through three pathways: building trust, establishing norms, and linking people to networks and services. Through such services as school-based health centers, nutrition education, family mental health counseling, violence prevention, and sexuality education, these schools build on the multiple reciprocal relationships between health and education. By developing closer ties between community schools and neighborhood health programs, public health professionals can help to mobilize a powerful new resource for reducing the health and educational inequalities that now characterize US cities. We suggest an agenda for research, practice, and policy that can build the evidence needed to guide such a strategy.*

KEYWORDS *Community schools, Community health, Health inequities, Public education, Urban education*

INTRODUCTION

To fell two birds with one stone has always been an appealing objective. Today many US cities are burdened by stark inequalities in educational achievement, health, and income. Any solution that could contribute to closing these gaps in health and education simultaneously is attractive to policy makers, researchers, advocates, and the public. Until recently, most researchers have studied the health and educational determinants of disadvantage separately and focused more on documenting their causes than on finding ways to close the gaps. New research that emphasizes the reciprocal relationships between the two¹⁻⁴ may help to identify opportunities for researchers and professionals working in education and health to collaborate to uncover approaches that simultaneously shrink both types of inequities. In this report, we consider the potential for such a role from community schools, a widely used model of education that links schools, students, families, and communities to educate children and strengthen neighborhoods.

Community schools emerged from a long tradition of using schools to promote democracy and equity developed by Jane Addams, John Dewey, and others.⁵ They received formal government support in the USA in the late 1970s⁶ and were recently

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endorsed by the US Centers for Disease Control and Prevention (CDC) and ACSD (formerly the Association for Supervision and Curriculum Development) as part of the Whole School, Whole Community, Whole Child (WSCC) model.⁷

Multiple positive and reciprocal associations between education and health are well established. Healthy students have higher rates of academic success⁸ and, over a lifetime, people with higher levels of education experience better health than their less educated counterparts.^{9,10} Specifically, more education is consistently associated with longer life expectancy and lower morbidity and disability^{9–15} as well as decreased risky health behavior.^{9–12,14–16} Several pathways have been proposed to explain these reciprocal relationships, including the associations between education and wealth, higher levels of social support and prosocial networks associated with more education,^{16,17} and the contribution of education and health to coping with stress.^{18,19}

However, dramatic inequities in health and educational outcomes persist in the USA. The interactions between health and education create a cycle of disadvantage, as shown in Fig. 1. Students in poor neighborhoods have worse educational outcomes^{20–22} leading to worse health outcomes later in life.^{12,23} At the same time, children in poor neighborhoods have worse health outcomes²⁴ leading to lower educational achievement than their wealthier peers.^{25–27}

Here we explore the potential for community schools to create a cycle of advantage that promotes social processes that simultaneously improve health and educational outcomes. We also propose a conceptual model for investigating the social processes by which community schools contribute to more equitable educational and health outcomes. Since low income populations,²⁸ health^{29,30} and educational^{31,32} inequities, and community schools³³ are all concentrated in cities in the USA, community schools that accelerate such cycles of advantage may provide a promising strategy for improving health and educational equity for urban populations.

FIG. 1 Community schools as a public health strategy.

TABLE 1 Neighborhood mechanisms affecting health and education

Mechanism	Definition	Effect
Neighborhood mechanisms affecting education		
Collective socialization	Parents' and neighbors' availability and willingness to regulate norms and behaviors of neighborhood children.	Enforces norm of valued education; Normalizes educational achievement and activities made possible by education through role modeling (i.e., professional careers)
Social control	The monitoring or sanctioning of certain behaviors that maintain social order according to shared norms and values of the neighborhood	Regulates norms and values such as attending school during school hours (not skipping school), valuing education, striving for academic achievement
Social capital	Networks that exist among residents or between residents and others outside of their neighborhood	Provides opportunities for internships, jobs, role models; provides resources and networks to aid accomplishing educational and life goals
Differential occupational opportunity	Understanding and witnessing the value of education; linking academic success with life success such as financial stability	Encourages dedication to education; links a student's current self (as student) to future self (successful professional)
Neighborhood mechanisms affecting health		
Social ties/interactions	Social capital, a resource realized through social relationships	Supports networks to decrease the negative effects of traumatic events.
Norms and collective efficacy	Mutual trust and shared willingness to intervene for the public good	Increases willingness of residents to intervene to endorse healthy norms; improves safety of neighborhood, particularly for youth
Institutional resources	Quality, quantity, and diversity of institutions in the community that address the needs of youth (e.g., libraries, schools and other learning centers, organized social and recreational activities, medical facilities)	Increases (or reduces) access to the resources children and families need to support health and healthy choices and behavior
Routine activities	Land use patterns and distribution of daily routine activities affect children's well-being	Influences the types of people (positive or negative) with whom residents interact; and availability of role models and behavioral choices

Building Trust

- norms and collective efficacy (health)
- social control (education)
- Institutional resources (health)
- Routine activities (health)

Establishing Norms

- collective socialization (education)
- differential occupational opportunity (education)
- social ties/interactions (health)
- Institutional resources (health)

Linking People to Networks

- social capital (education)
- differential occupational opportunity (education)
- social ties/interactions (health)
- Institutional resources (health)
- Routine activities (health)

Applying a public health lens to community schools is appropriate because their explicit mission is to have a population effect, a goal that other school models may not embrace. As educational institutions, community schools emphasize academic success as a priority, but they also identify multiple other public health goals including physically, socially, and emotionally healthy students and families and safe, supportive, stable schools and communities for residents with and without children.^{24,34} Community schools, claim its proponents, result in improved student learning, stronger families, and healthier communities.^{34,35}

Through their relationships with neighborhoods, community schools enhance three social processes that can accelerate the health-education cycle of advantage, particularly in disadvantaged neighborhoods: building trust, establishing norms, and linking people to networks and services. As shown in Table 1, evidence from education, public health, community development, psychology, and sociology suggests that these three processes simultaneously improve health and educational outcomes.^{36–42}

In this article, we first review how neighborhood level processes affect health and educational outcomes. We then summarize the existing research on the impact of community schools in various domains and explore how further enhancements of their health focus can become an explicit public health strategy that contributes to increasing equity in health and educational outcomes. We conclude with recommendations for policy, practice, and research between the fields of education and public health that can provide evidence to enhance the health impact of community schools.

NEIGHBORHOOD MATTERS

Sampson suggests that “community-level prevention that attempts to change places and social environments rather than people may yield payoffs that complement the

traditional individual-specific approach".³⁶ (pS61) Characteristics of neighborhoods such as racial and economic segregation and employment rates are commonly cited as explanations for the health and educational gaps between neighborhoods, but these relationships do not explain *how* neighborhoods affect these outcomes.^{36,37,43-46} In order to address this question, researchers in each sector have investigated several social processes that have been linked to both educational and health outcomes.³⁶⁻⁴²

Education researchers have identified collective socialization,^{38,47-49} social control,⁵⁰ social capital,^{48,51-54} and differential occupational opportunity^{45,48} as mechanisms through which neighborhoods affect educational outcomes. Another body of literature, not considered here, also examines whether and how school characteristics such as quality and staffing influence educational outcomes.^{38,43} Similarly, health researchers have documented the impact of pathways by which neighborhoods affect health outcomes. Based on a literature review by Sampson, Morenoff, and Gannon-Rowley³⁹ and supported by others, these pathways can be organized into four categories: social ties and interactions,⁵³⁻⁵⁶ norms and collective efficacy,^{37,39,57} institutional resources,⁵⁸⁻⁶⁰ and routine activities.^{45,59,61}

To provide a framework for empirical studies of community schools, we propose three consolidated processes that combine the overlapping concepts identified by education and health researchers. Fuller implementation of the processes labeled as building trust, creating norms, and linking to networks has been associated with better health^{37,53,57,62,63} and educational^{38,54,64-66} outcomes. For each of these social processes, the resources of local institutions, residents, and leaders provide the human capital and social spaces in which the processes unfold. The frequency, quality, and intensity of the social practices and routine activities these institutions and individuals carry out influence the direction and magnitude of their influence on educational and health outcomes.^{37,45}

Trust. The social process we define as building trust encompasses norms and collective efficacy^{37,39,57} from the health literature and social control⁵⁰ from the education literature. Collective efficacy, composed of social cohesion and shared expectation for social control, is the mutual trust and shared willingness to intervene for the public good. Through repeated interactions, opportunities to witness interactions, and anticipation of future interactions, residents develop shared norms and confidence that these norms will be encouraged and expected by other neighborhood residents.³⁷

Trust, as we define it, has been associated with health and safety outcomes such as rates of crime (more collective efficacy leads to lower crime rates) and asthma as well as birth weight, self-rated health, and children's level of physical activity.^{37,57,62} For example, trust may influence a neighborhood's ability to protect against environmental hazards and benefit from resources, and may encourage pro-health communication that decreases asthma risk and improves asthma management.^{67,68}

Similarly, aspects of trust have been proposed as a mechanism through which neighborhoods affect educational outcomes through monitoring or sanctioning of certain behaviors that maintain social order according to shared norms and values of the neighborhood.³⁸ Through repeated interactions, neighborhood residents build a foundation of mutual respect and responsibility that make it more likely that community members will share norms and values that create an environment that supports education.³⁸ For example, adults may be more likely to report a child skipping school or praise academic success once common norms are realized through repeated interactions.

Without opportunity to build such relationships and anticipate positive norms, youth are more likely to fall under negative peer or societal influences as opposed to parental influence, possibly leading to anti-school attitudes and behaviors (i.e., dropping out of school).³⁸ Key resources for building trust are participation in neighborhood organizations and events and repeated actions such as pickup and drop-off of students at school and regular use of neighborhood resources.

Norms. Developing community norms that support health and educational success, the second social process, encompasses collective socialization^{38,47–49} and differential occupational opportunity^{45,48} from the education literature and social interactions^{54–56,68} from the health literature. Collective socialization is the availability of caring adults who are willing to establish and enforce standards for the success and safety of children.⁶⁴ This includes but is not limited to the existence of role models such as visible adults (and young adults) who have either had academic success themselves or outwardly value and encourage academic success in youth.^{38,65}

Norms have been found to be positively correlated with physical activity levels of children⁶² and can be a protective factor against deviant peer behavior.⁶³ Shared norms decrease antisocial behavior in a neighborhood and encourage more organized events thus decreasing the probability of youth interacting with others exhibiting problem behavior or experimenting with socially sanctioned activities.⁶³ Institutional resources that can support development of positive norms include tenants and neighborhood associations, parent-teacher groups, churches, and youth organizations.

Networks. The third social process links children and families to social networks that include peers, formal and informal community groups, health and social services, and public agencies and leaders. From the educational literature, this process includes social capital^{48,51–54} and differential occupational opportunity.^{45,48} From the health literature, it includes social networks^{53–56} and various advocacy theories.⁶⁹

While social capital is associated with academic achievement at all levels, the effects of bonding social capital, the networks between neighborhood residents, becomes stronger as children age.⁶⁶ Networks can provide opportunities, information, resources, and assistance that enhance the educational experience of students. Neighborhoods with dense networks can better provide useful information to help struggling students to succeed academically, find options for job opportunities, or connect to resources for educational advancement such as applying to college or pursuing vocational certificates.³⁸

Networks are also associated with health and may in part protect against the negative health effects of living in disadvantaged neighborhoods.⁵³ For example, neighborhoods made up of disadvantaged, ethnically homogeneous groups have high levels of bonding social capital and have better mental and physical health outcomes than individuals of that ethnic background living in more advantaged but more ethnically diverse neighborhoods.⁵³ Networks can also provide access to a variety of material resources that improve health such as mental health services, health insurance, healthy food, and chronic disease management. Institutional resources that can help to link children and families to networks include health and social service agencies, advocacy and civil rights groups, churches and other religious institutions, and volunteer organizations.

In sum, theories from an interdisciplinary framework suggest multiple pathways by which community schools can build trust, establish shared norms, and link residents to networks in order to improve health and educational outcomes. In the next section, we examine how community schools are realizing this potential in practice.

COMMUNITY SCHOOLS

The vision of community schools is to educate students who are academically successful; physically, socially, and emotionally healthy; and who live and learn in safe, supportive, and stable environments in communities that are desirable places to live.³⁵ Community schools seek to multiply the public resources available for education and health by leveraging the social capital and human assets to meet each school and community's specific needs. At best, community schools become a comprehensive resource for children, families, and communities in which the cumulative impact exceeds the sum of the impacts of each constituent element.

In practice, community schools are heterogeneous and vary in their capacity to achieve their vision. However, common elements exist that constitute the essential characteristics of the model. These include a focus on education for children, families, and community residents; expanded opportunities for learning before and after school and on weekends; access to health care through school-based health centers or nearby community health and mental health centers; opportunities for health promotion and wellness in such areas as food, physical activity, and sexuality education and services; and increased opportunities for partnerships with school and community-based programs. Table 2 shows the range of programs offered by community schools. While no school provides all these services, this extensive array of programs and partnerships constitute the human capital that make community schools a public health resource for children, families, and community residents.

Available reports show community schools are effective in improving academic outcomes, particularly for disadvantaged students.⁷⁰ Positive individual level outcomes documented in peer-reviewed publications include improved academic achievement,^{71–77} attendance rates,^{72,73,75–77} graduation rates,⁷⁷ prosocial behavior,^{75,76} and parent engagement.^{71,72,74} Positive school and community level outcomes that are documented primarily in the gray literature include more use of school facilities, increases in community pride, and improvements in neighborhood safety.^{78,79}

Assessing the population impact of community schools remains challenging. Although the community school model is firmly grounded in its community context, most studies have focused on educational outcomes for students and few have examined how community schools contribute to the well-being of the larger populations they serve. The heterogeneity of community schools makes comparison between schools difficult; data collection may be done by multiple partners in one school or school system and often the necessary infrastructure to share and synthesize data is not available. Legal restrictions on sharing of data also challenge rigorous outcomes-based research.⁸⁰ Moreover, the evidence that is published cannot be easily synthesized; for example, some reports evaluate changes in scores on standardized educational tests^{24,81,82} while others evaluate the social impact of various community school programs.^{80,83}

TABLE 2 Community school programs and activities

<i>Extended Education</i>	<i>Opportunities for Wellness</i>
Before-school programs	Nutrition and cooking classes
After-school programs	Sports/recreation—child and adult
Weekend programs	Family counseling
Summer programs	Youth development activities
English as a Second Language programs	Family life/human sexuality workshops
Parenting classes	Teen pregnancy prevention programs
Career education	Substance abuse prevention counseling
Adult education classes	Crisis intervention
Community service	Case management
Computer classes	
Literacy classes	
GED classes	
Leadership training	
Early childhood programs	
Pre-kindergarten	
<i>Health Care Access</i>	<i>Other</i>
Clinic access	Legal advice
Insurance enrollment	Internships/entrepreneurships
Mental health services	Information on emergency assistance, food, housing
Sexual and reproductive health care	Employment assistance
Vision care	Workforce training programs
Dental care	Tenants' rights information
Medical referrals	Immigration advice
Immunizations	Grandparent/senior involvement
	Community clean-up projects

“Peace teams” with local police

Community advocacy support

Leadership training

Based on authors' experience and Coalition for Community Schools. Community School Models 2009. <http://www.communityschools.org/assets/1/AssetManager/Community%20School%20Models2009.pdf> and Children's Aid Society. *Building a Community School*. 3rd Edition. New York, NY; 2001. <http://www.childrengroups.org/publications/building-community-school-complete-manual>

COMMUNITY SCHOOLS AS A PUBLIC HEALTH STRATEGY

Community schools provide opportunities to improve public health through each of the three identified pathways, operationalized via the programs and services shown in Table 2. Several key community school goals support this impact on health.

Focus on Education. By offering expanded learning opportunities for students, families, and community residents, community schools strengthen the “education improves health” pathway within the cycle of advantage shown in Fig. 1. For children enrolled in the school, the educational philosophy of community schools increases the likelihood that students will attend school, complete assignments, achieve academic goals, and graduate on time.^{71–77} These outcomes increase academic success and therefore improve lifetime health.^{9–15}

In addition, out-of-school time activities such as before-school, after-school, vacation, and summer programs have been shown to improve psychosocial well-being,⁸⁴ nutrition,⁸⁵ and health literacy of youth⁸⁶; reduce problem behaviors⁸⁴; and increase levels of physical activity.^{85,87–89} Adult education programs have been shown to improve the health of participants, reduce health system barriers, and increase participants' confidence in using the health system.^{90–93} Similarly, job training programs have been proven to improve health of participants and communities.^{94,95}

Health Care Access. Community schools provide access to health care through school-based health clinics or partnerships with local resources.⁴ Strong evidence of improving the health of students in community schools comes from the literature on school-based health centers (SBHCs). More than 2315 SBHCs are located across the country, with more than half located in urban schools. In the 2013–2014 national census of SBHCs, about 56 % reported they provide services to people beyond students enrolled at the host school including school staff, family members, other youth in the community, and other community members.⁹⁶ SBHCs have been shown to contribute to improved access to preventive, secondary, tertiary care, and mental health services for students^{97–100} which, in turn, has been associated with students being less likely to use or abuse substances such as marijuana and alcohol, less likely to carry a weapon, and less likely to get in a fight.^{100,101} Students who used SBHCs were found to have increased attendance compared to nonusers, and students who used mental health services of SBHCs showed grade-point average increases compared to nonusers.¹⁰² Their reach extends beyond students: SBHCs provide opportunities for health education, screening and detection services, Medicaid and other health insurance enrollment, and other forms of outreach for non-students.⁹⁹

Opportunities for Health Promotion, Wellness, and Safety. Community schools also provide a variety of opportunities for students, families, and neighborhood residents to

participate in health- and wellness-promoting activities.

SBHCs have been particularly successful in providing reproductive health services in schools. SBHCs offer a range of pregnancy prevention programs and sexual health services: 83 % provide abstinence counseling, 70 % STI diagnosis and treatment, and 80 % provide pregnancy testing.⁹⁶ Students attending a school with an SBHC were more likely to report receiving health care provider counseling and classroom reproductive health education than students in a school without an SBHC.¹⁰³ While research is equivocal on whether SBHCs influence contraceptive use, the percentage of SBHCs that provide contraceptives is increasing. However, about half of SBHCs are prohibited from dispensing contraceptives.⁹⁶ Some studies have shown that contraception use is greater at a school with SBHCs compared to schools without.^{103,104}

Partnerships between communities and schools have been shown to improve health and wellness indicators such as fruit and vegetable intake,^{105,106} reduced screen time,¹⁰⁵ and increased knowledge of nutrition and physical activity.¹⁰⁷ Schools can improve food access, nutrition, and physical activity levels of neighborhoods. Farm-to-school food programs support a community food systems approach, linking farmers with various resources in the community through their school relationship.¹⁰⁸ School gardens increase parent interaction and involvement,¹⁰⁹ and revitalization of school grounds increases physical activity options for students and communities and provides gathering space for community members.^{110,111}

The Coalition for Community Schools claims that community schools are beneficial to the community at large through “better use of school buildings, community pride and neighborhood safety”.⁷⁸ A study of community schools reported an increase in feelings of safety from students and neighborhood improvement by having a safe place to go to in the evenings.⁸² While the presence of schools is often associated with increased levels of crime, specifically drug crime, studies often find that elementary schools have a protective effect explained by the increase in adult supervision through parent involvement and smaller teacher to student ratios.^{112–114} The community school model encourages greater participation by adults in the school building which could offer the same increase in oversight as an elementary school and thus similar protective characteristics.

Opportunities for Community Interaction and Partnership. Through these and other activities, community schools encourage multiple and ongoing interactions among children, families, neighborhood organizations, service providers, and community residents. These interactions facilitate the social processes of building trust, establishing shared norms that support success, and linking residents to health-promoting networks and services. Cumulatively and synergistically, these activities create the spaces and times to participate in and witness repeated neighborhood interactions and to develop the expectation that future interactions will occur. These interactions support shared norms and values that build a trust among neighborhood members. In addition, increased services for all community residents and organizational practices that engage rather than stigmatize or isolate community members build the community cohesion and dense networks that sustain well-being. The human and material resources that community schools leverage increase the linkages among residents, social networks, and other institutions, processes defined as bonding and bridging social capital.⁵⁴

To date, researchers have not systematically explored these multiple associations between community schools and neighborhood health. This review of the neighborhood social processes that influence education and health and the health-related activities of community schools raises several questions that warrant empirical investigation:

1. On what levels (e.g., individual, family, school, or community) do community schools influence various indicators of community health? How and in what ways does the health influence vary by level? What is the cumulative and synergistic impact of influences across levels and outcomes?
2. How do community schools affect the health of the population of their surrounding neighborhood? What are the pathways and mechanisms through which these influences take place?
3. Which activities and services that community schools offer have the most important influences on health? To what extent does this vary by school and community characteristics?
4. Does living closer to a community school influence the level of health of neighborhoods? Does the density of community schools within a neighborhood influence community health?
5. What educational, health and other social policies facilitate or block the health-enhancing potential of community schools?

FUTURE RECOMMENDATIONS

Now is an opportune time to investigate the possible influence of this collaborative school model.^{4,34} The federal government has embraced the concept of targeting geographic areas for multi-level change with the following initiatives: Promise Neighborhoods, Choice Neighborhoods, Full-Service Community Schools, Promise Zones, and the Every Student Succeeds Act.^{34,79} New York City has taken particular interest in community schools. Mayor Bill de Blasio has committed to using community schools to increase equity in the city. De Blasio promised to create 100 new community schools during his time as mayor and has started to fulfill this promise through a partnership with the United Way of New York City, making it a prime location for research, practice, and policy development. By February 2016, NYC Department of Education supports 173 community schools.¹¹⁵ Other cities with a strong commitment to community schools include Chicago, Indianapolis, Cincinnati, Tulsa, and others.¹¹⁶

Research. To help answer the questions posed above, we suggest the following research initiatives:

- Conduct systematic investigations of the activities in community schools that provide time and space for social processes to develop among the neighborhood residents to discover the effect size of different types of programming on specific health outcomes. This can help to set priorities for adding particular elements to community schools in order to most effectively meet a neighborhood's unique needs.
- Conduct spatial analyses that compare neighborhoods matched on sociodemographic factors to discover the differences in levels of social processes and health and wellness indicators between neighborhoods with and without community schools.
- Conduct qualitative studies with neighborhood members, teachers, administration, students, and parents to explore the congruence of perceptions among various constituencies and across different communities about the pathways

through which community schools influence the health and wellness of all constituents.

- Conduct comparative longitudinal case study analyses of a limited number of neighborhoods that contain community schools and those that do not to examine how these schools may, over time, contribute to neighborhood health and wellness.

Practice. Public health professionals can take actions that will contribute evidence that can guide efforts to increase the impact of community schools on academic success and community health.

- Standardize data collection in community schools and identify common metrics for assessing impact on educational and health equity. This will enable better comparisons between community schools and other schools. Leading coalitions should spearhead this effort and provide training on its value and function.
- Expand the number of SBHCs in community schools and support the development of evidence-based practices that contribute to improvements in student, family, and community health.
- Convene coalitions that promote resource sharing between the community schools within a jurisdiction and among community schools and health, social service, and community agencies.

Policy. Public health professionals can also help to identify and advocate for policies that strengthen the role of community schools in promoting educational and health equity.

- State governments should permit Medicaid and other health insurance programs to reimburse health services provided at SBHCs for students and non-students (including neighborhood residents).¹¹⁷
- SBHCs should become key members of the various care networks developed under the Affordable Care Act.¹¹⁸
- Teachers' unions and local departments of education should develop overtime and scheduling policies for teachers and school personnel to ensure that schools can keep their doors open longer and compensate staff fairly.
- Offer incentives such as tax breaks or subsidies for organizations that establish meaningful partnerships with community schools opportunities in order to link the business community with community schools.
- Create methods to link confidential health and education data on students and families to allow for research on the long-term effects of various health and education initiatives.

CONCLUSION

Community schools began more than a century ago and have expanded dramatically in the last two decades. To date, however, few researchers have systematically studied how community schools affect their communities. Plans to expand the number of community schools in New York and other cities provide an

opportunity to understand better how community schools shape the health and wellness of the populations they serve.

Community schools deserve our attention because they offer a practical way to reduce two of our nation's most serious problems: wide and persistent gaps in academic success and health status. Community schools have the potential to convert the current cycle of disadvantage between health and education into a virtuous circle of advantage, creating new opportunities for more level playing fields for the low income children and families concentrated in US cities.

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