Estimating Health Education Instructional Time Within a Texas Public School District

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Research Question: How much time is dedicated to health education for elementary students in grades Kindergarten through 5th in 2017-2018 school year?

Background

Health Literacy: individual's ability to have cognitive and social skills that allows them to gain access to, understand, and use information in ways to promote and maintain good health

➢ Asset to be built by different forms of health promotion actions like personal, social, and environmental

The goal of being health literate in the public health aspect is to set individuals on a path that supports greater empowerment in health decision-making skills, starting with reducing risk factors for heart disease.
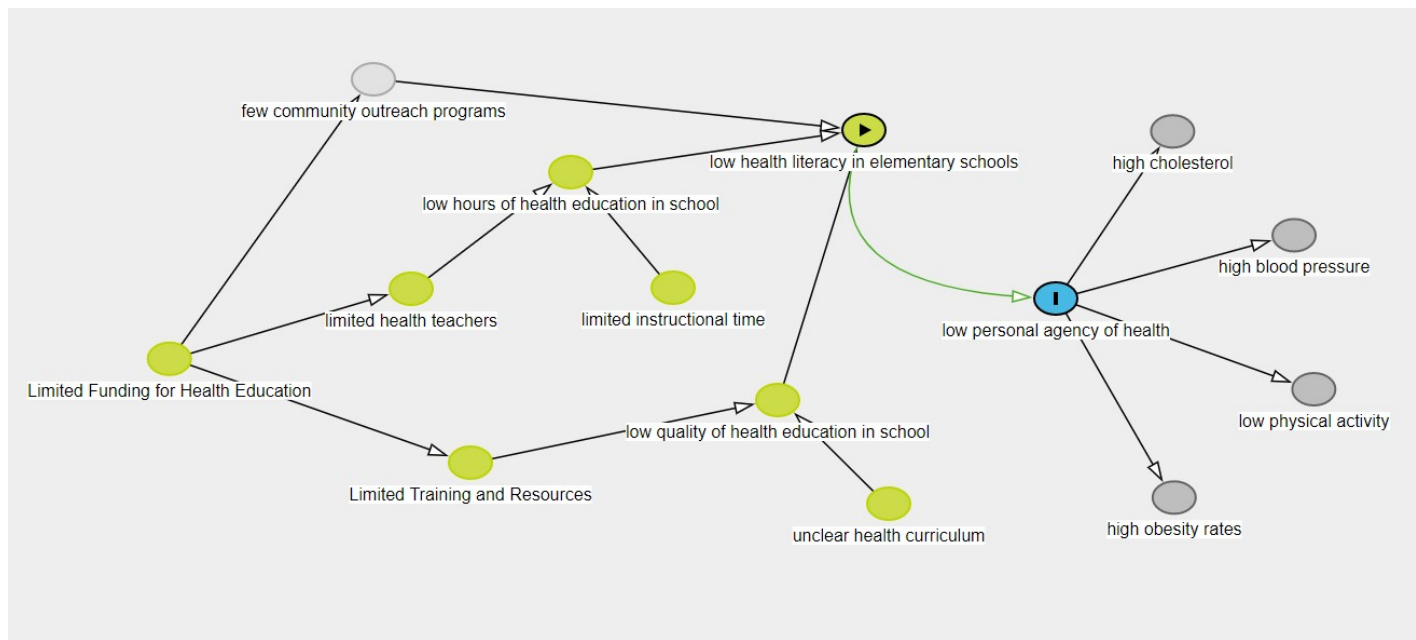

Table 1: Directed Acyclic Graph

➢ Health education is health promotion action provided in school for elementary students in grades Kindergarten-5th, since school serves to provide fundamental basis for instilling such behaviors.
➢ When students develop these valuable skills at an early age, this could result in changes to their attitudes, knowledge, and lifestyle decisions
➢ Health disparities also exists within different groups like those who have a low household income along with race/ethnicity, where obesity is prevalent mainly in Black and Hispanic adults compared to other races
➢ When students receive limited instructional time along with having little to no health teachers, this could lead to low quality of health education, and ultimately low health literacy in elementary schools

Centers for Disease Control and Prevention (CDC) recommends elementary school students should receive:
90 hours of health education in school year

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Methodology

➢ Texas school data obtained from the Center for Research, Evaluation, and Advancement of Teacher Education (CREATE) and Texas Education Agency (TEA)
➢ R programming filtered the elementary schools in one urban Texas district efficiently in different categories under the subject of "Health"

Percentage of Full-time Equivalent (FTE) of "Health" Subject x 32.5 hours per week = Total Hours per Week (HpW)
*8 full-time hours – (45 min. planning period + 30 min. lunch) x 5 days a week = 32.5 hours per week*

➢ However, because there may be teachers who taught "Health" but may be labeled as "Generic" for the category of "Subject," the time taught per year was inflated by 25% to give more leverage to the approximation

(HpW/Total Number of Classes) x 36 school weeks = Per Year x 1.25 *(Inflation)* = "each classroom gets x hours of health education in a school year"

➢ Number of teachers certified in the "Health and Physical Education" area was also observed

Different populations were taken into consideration like:
➢ Economically disadvantaged students
➢ Minority students with high obesity prevalence (Black and Hispanic)
➢ At-risk students
➢ Teachers certified in "Health and Physical Education" area
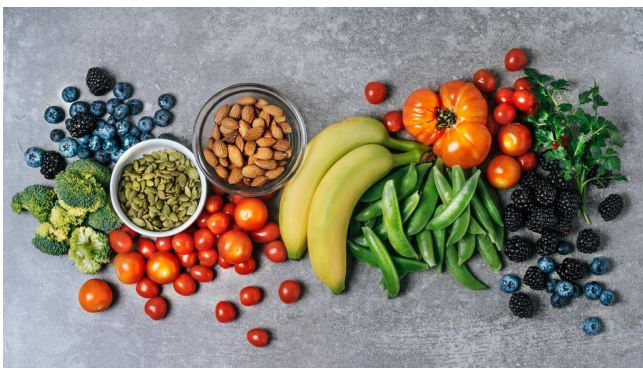
Conclusion

As health education is becoming an important asset for both children and adults alike, students in schools should be given adequate amount of time to learn and build health literacy. The potential for school health education to improve health and save lives is significant.

Future Plans

Because this was an analysis in one Texas district, the same method could apply for other school districts statewide while observing the different populations and see if there's any significance and pattern within that.
➢ Geographic locations and food deserts could also be accessed with the schools receiving low health education hours.
➢ In a brief interview with a Physical Education teacher in the Texas district that was analyzed, an educator attested that there is no longer a health class because it is combined as Physical Education. This is important because this would suggest that the actual hours of health education taught would be lower since it is no longer its own class.

Results

➢ Out of 157 schools in this district, 82% of schools had the full-time equivalent (FTE) provided for "Health" subject
➢ Within those 129 elementary schools, 16% of the schools have met the Center for Disease Control and Prevention's (CDC) recommendation of 90 hours per year
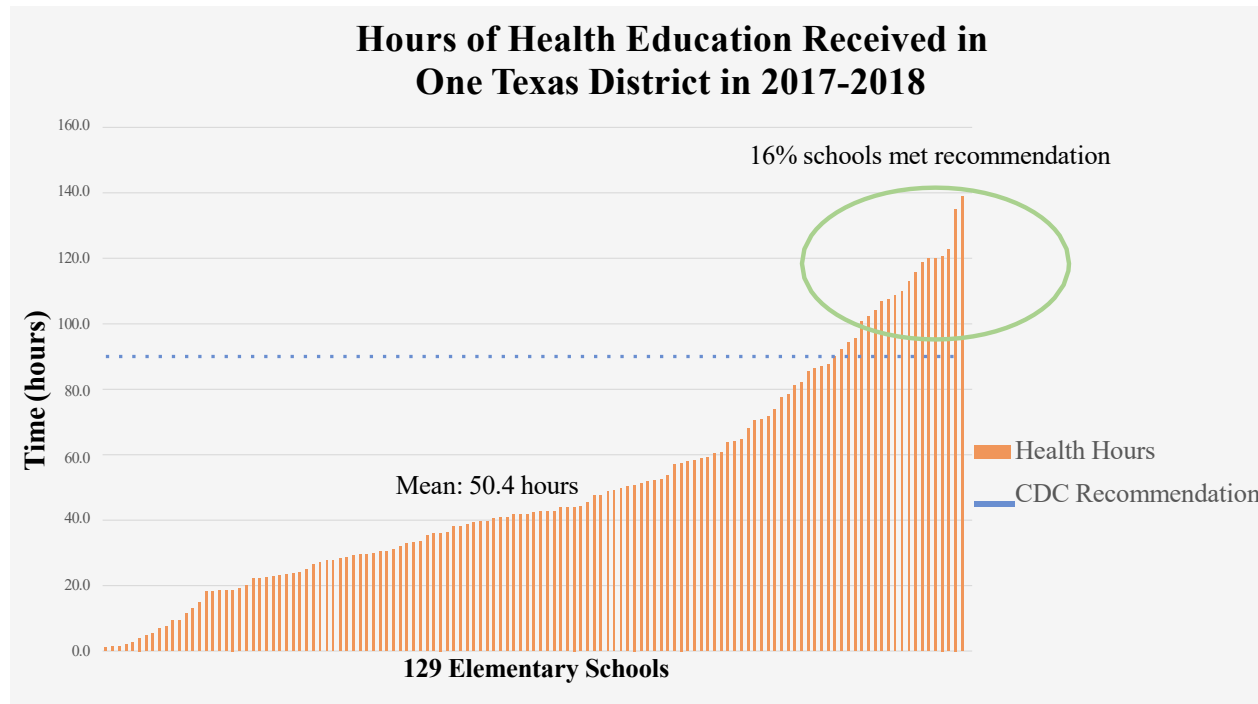
Lowest Number of Health Education Hours

Campus	Total Hours Per Year	Econ. Disadv.	Black	Hispanic	At-Risk	Teachers Certified
A	1.2	95.7%	84.4%	14.2%	75.3%	5.9%
B	1.3	89%	94.1%	3.5%	56.5%	0%
C	1.3	93.6%	8.2%	89.3%	73.9%	2.9%
D	2.0	72.8%	7.3%	84.1%	78.5%	2.2%
E	2.6	86.4%	72.4%	26.1%	69.4%	0%
		Mean: 87.5%	Mean: 53.3%	Mean: 43.4%	Mean: 70.7%	Mean: 3.7%

In a sample comparison between the five campuses with the lowest numbers of health education hours, the number of Black and at-risk students are higher than the top five campuses with the highest health education hours.

Highest Number of Health Hours

Campus	Total Hours Per Year	Econ. Disadv.	Black	Hispanic	At-Risk	Teachers Certified
F	120.0	97.5%	16.3%	81.5%	84.2%	0%
G	120.7	95.3%	71.9%	26.1%	64.8%	7.3%
H	122.8	96.2%	81.5%	17.9%	54.7%	1.9%
I	135.1	91.7%	75.9%	22.3%	68%	3.8%
J	139.0	78.5%	5.2%	91%	68.6%	0%
		Mean: 91.8%	Mean: 50.2%	Mean: 47.8%	Mean: 68.1%	Mean: 4.3%