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Walking to School and Implications for Public Policies

Survey Results from Parents of Elementary School Children in Austin, Texas

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School development trends show an increase in building larger schools in remote areas near high-capacity roads. Public policies such as building codes and state funding formulas encourage school consolidation to increase economic efficiency, but these practices often facilitate automobile access at the expense of walking or biking.

Researchers Xuemei Zhu and Chanam Lee from Texas A&M University conducted a study on elementary school students' mode of transportation to and from school in the Austin Independent School District (AISD) in Austin, Texas. The study finds that centrally-located neighborhood schools and programs like the "Walking School Bus" can encourage walking, and additionally, pedestrian infrastructure like sidewalks and traffic signals in low-income areas needs improvement.

"Without appropriate school location and walkable distance, improving sidewalks or street crossing conditions will have limited impacts on walking."

Through a survey sent home with students for parents/guardians, the study sought to identify the factors that influence walking to and from school among elementary school children. The researchers also explored policy implications as well as social disparities issues, because low-income and minority children walk to school more often but typically do so in less safe environments.

FACTORS THAT INFLUENCE WALKING TO SCHOOL

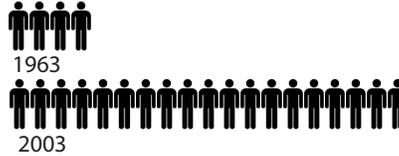
	<i>Personal & Social Factors</i>	<i>Built Environment Factors</i>
<i>Positive influences on walking</i>	<ul style="list-style-type: none"> Parents' and children's positive attitudes (walking being good for exercise and being "cool"/enjoyable) and regular walking behavior Positive peer influences (other children's and parents' walking behaviors) 	<ul style="list-style-type: none"> Parents' perception of distance as close enough for the child to walk
<i>Negative influences on walking</i>	<ul style="list-style-type: none"> Parents' highest level of education and household car ownership Parents' personal barriers (time constraint, convenience of driving the child) Less likely to walk if school provides bus service 	<ul style="list-style-type: none"> Parents' safety concerns and the need to cross highways Presence of convenience stores and office buildings

“In the United States, the percentage of K-12 students walking or biking to school declined from 41% in 1969 to 13% in 2001, and this decline was greatest among minority and elementary school children. The prevalence of overweight 6- to 11-year-olds increased from 4.2% in 1963-1965 to 18.8% in 2003-2004 with even higher rates among minority children.”

Decrease in walking/biking to school



Increase in overweight 6- to 11-year-olds



McDonald NC (Am J Prev Med.); Ogden CL, Flegal KM, Carroll MD, Johnson CL (JAMA); Centers for Disease Control and Prevention.

FINDINGS

Zhu and Lee found that private vehicles accounted for the largest share of school trips, at approximately 50%. Walking comprised an average 30% of trips (28% of morning trips and 32% of afternoon trips), and a parent or other adult accompanied the child for three-quarters of walking trips. Additionally, 76% of walking trips had travel times less than 15 minutes.

Several factors influenced choice of travel modes. These included:

- parents’ education and car ownership
- peer influences and regular walking behaviors
- school bus availability
- presence of highways, convenience stores, office buildings, and bus stops en route to school

IMPLICATIONS FOR PRACTITIONERS

Policy change is needed where minimum acreage requirements, school funding formulas, and building codes favor development of new schools in peripheral areas of the neighborhood over renovation of existing neighborhood schools. Centrally-located neighborhood schools with barrier-free attendance areas can remove impediments such as long distances or the need to cross a highway; thus, school consolidation policies should be reexamined for their impact on school transportation.

Federal and local funding efforts to create safe routes through infrastructure improvement fail to address the way schools are located and developed. Without ensuring appropriate school location and walkable distance, improving sidewalks or street crossing conditions will have limited impacts on promoting walking.

The “Walking School Bus” approach involves parents or other volunteers leading a group of students as they walk to/from school, helping overcome parental safety concerns and time constraints. The potential of this program is underscored by the finding that 75% of children who walked to/from school in this study were accompanied by a parent or guardian.

Furthermore, addressing socioeconomic disparities should be a high priority. This may include subsidizing “Walking School Bus” programs coupled with reallocating federal and local funding for traffic-calming and pedestrian infrastructure in lower-income areas to ensure safer walking trips to and from school.

Average mode shares for transportation to and from school:

1. Walk alone	2.75%	} Total walking: 29.65%
2. Walk with friends	4.6%	
3. Walk with a parent/adult	22.3%	
4. Bike	1.35%	
5. School bus	16.85%	
6. Public bus	1.8%	
7. Private car, including carpool	50.25%	

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