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**INSTITUTE FOR SOCIAL RESEARCH**  
*Celebrating 60 Years of Social Science in the Public Interest*

### Social Participation among Older Adults with Disabilities: The Role of the Urban Environment



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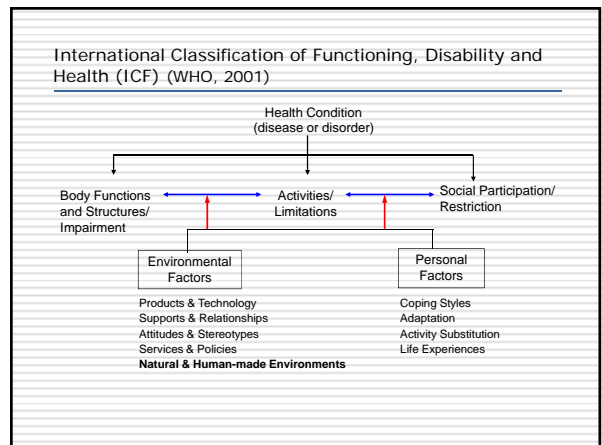
### The Social Construction of Disability

“Disability is a function of the gap between a person’s capabilities and the demands created by the physical and social environment.”

Saad Nagi, 1965





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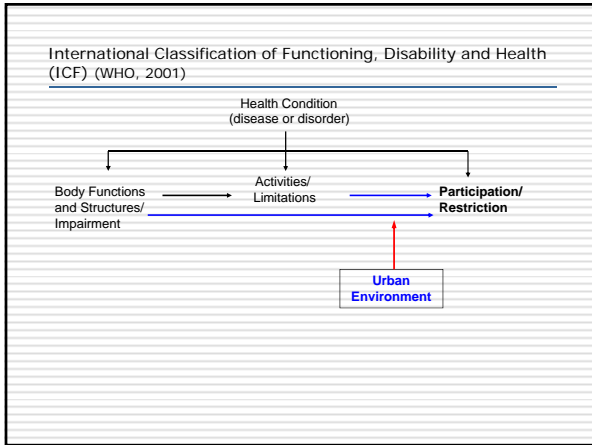


### The Urban Environment in the Disablement Process

- ❑ Poor street conditions, heavy traffic, and excessive noise are associated with the onset of physical impairments (Balfour and Kaplan, 2002; Schoutman, et al., 2006).
- ❑ Poor street conditions are associated with a higher odds of walking difficulty among adults with lower body impairment (Clarke et al., 2008).
- ❑ Uneven sidewalks and sidewalk obstacles (i.e. loose rocks, stones, and other debris) are responsible for the majority of outdoor falls among older adults (Li, et al. 2006).
- ❑ Sedentary lifestyles and social isolation can have adverse consequences for health and independence (Cohen, et al., 1986; Jette, et al, 1992).


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- ### Data
- Chicago Community Adult Health Study (CCAHS) (House, Morenoff, Diez-Roux)
  - 3,105 individuals
    - aged 18 and over living in the city of Chicago
  - Face-to-face interviews (72% response rate)
  - Field period: May 2001- March 2003
  - Analyses restricted to age 45+ (N=1225)

- ### Social Participation
- Social interaction ICFd9205
    - frequency of getting together with friends, neighbors, relatives (never, less than once a month, about once a month, 2 or 3 times a month, more than once a week)
  - Obtaining preventive health care ICFd5702
    - physical exam, blood pressure check, cholesterol check in past 2 yrs
  - Voting ICFd950
    - voted in last federal and/or mayoral elections

- ### Impairment or Activity Limitation
- Vision impairment (even with glasses)
  - Hearing impairment (even with a hearing aid)
  - Cognitive impairment (attention, concentration, memory)
  - Difficulty walking 2-3 blocks without help
  - Difficulty stooping, kneeling, climbing stairs, getting up from a chair (movement-related activity limitations index)

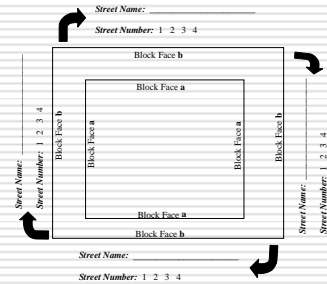
## Measures of Urban Environment

- Systematic Social Observation (SSO) – 1663 Blocks (Reiss, 1971; Raudenbush & Sampson, 1999)
- Direct observational method
- Capitalizes on interviewer visits to homes: while walking through small respondent-centered neighborhoods, characteristics are documented using a standardized instrument
- E.g. presence of litter, heavy traffic, condition of buildings/streets



## CHICAGO COMMUNITY ADULT HEALTH STUDY Systematic Social Observation Coding Sheet

**VERY IMPORTANT!!!**  
On the diagram below, please circle the street numbers and write the street names to indicate the starting point of your observations. All of the block faces on the inside of the block will be coded "a," and all block faces on the outside will be coded "b." If this diagram in no way resembles the block under observation, use the space at the bottom of the page to sketch a diagram, identifying streets with both a number and a name.



### QUESTIONS ABOUT ENTIRE STREET


QUESTION	STREET NUMBER			
	1	2	3	4
1. Volume of Traffic (CHECK ONE)				
1) No Traffic				
2) Light (occasional cars)				
3) Moderate				
4) Heavy (steady stream of cars)				
2. Condition of the Street (CHECK ONE)				
1) Under Construction				
2) Very Poor (many sizeable cracks, potholes, or broken curbs)...				
3) Fair				
4) Moderately Good (no sizeable cracks, potholes, or broken curbs)				
5) Very Good				
3. How noisy is the street? (CHECK ONE)				
1) Very Quiet – easy to hear almost anything				
2) Fairly Quiet – can hear people walking by talking, though you may not understand them				
3) Somewhat Noisy – voices are not audible unless very near				
4) Very noisy - difficult to hear a person talking near to you.				
4. Are there any people visible on the street? (CHECK ONE)				
1) Yes				
2) No (Skip to Question 6, p. 3)				






### Street Conditions (SSO)

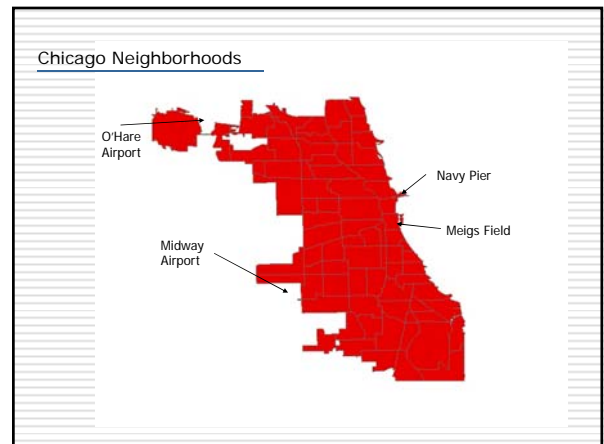
- Please Rate Condition of Street:
  - Very Poor (e.g. many sizable cracks, broken curbs, potholes)
  - Fair (e.g. some cracks, broken curbs, potholes)
  - Moderately Good (e.g. no cracks, broken curbs, but not freshly paved)
  - Very Good (e.g. freshly paved)
- Ratings typically based on 4 streets per block (inter-rater agreement = .803)
- Aggregated up to characterize wider neighborhood area (e.g. block group, census tract)

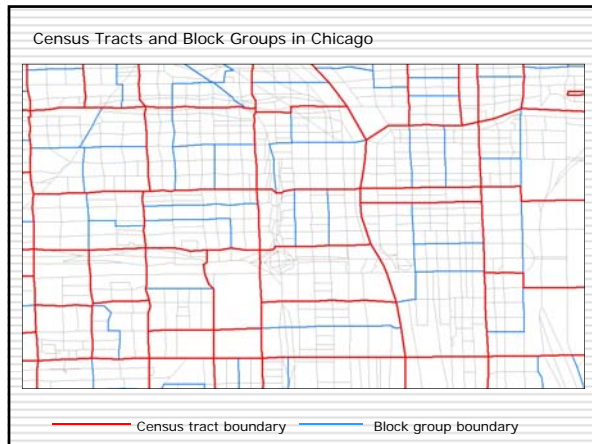

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### Measures of Urban Context

- Quality of street conditions (rubble, cracks, broken curbs)
- Neighborhood social disorder (graffiti, garbage, broken glass, empty beer/liquor bottles, abandoned cars, drug-related paraphernalia, condoms)
- Neighborhood decay (abandoned, burned out, boarded up housing, buildings in poor condition)
- Residential security (neighborhood crime watch signs or security warning signs)
- Noise levels, volume of traffic, tree coverage


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### Statistical Analyses

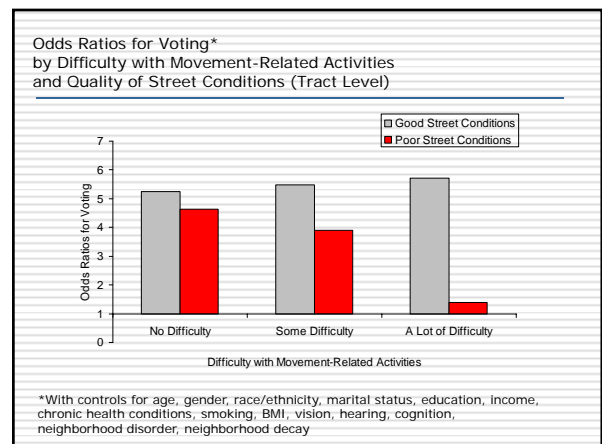
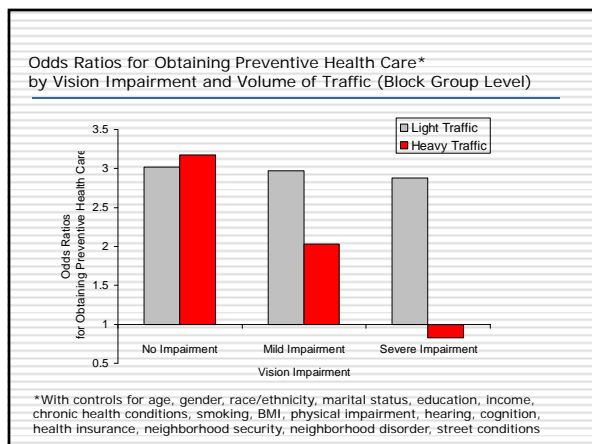
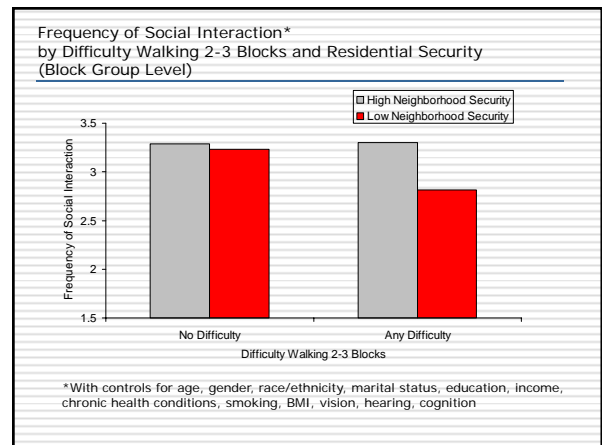
- Linear or Logistic regression (depending on the measure of participation)
- Single-level models for analyses at the block group level (1.5 obs/group, range 1-7)
- Multi-level models for analyses at the tract level (2.4 obs/tract, range 1-12)
- Models run in SAS 9.2 and HLM 6.08
- Weighted sample matches the 2000 Census population estimates for the city of Chicago (age, gender, race/ethnicity)

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### Descriptive Statistics

Chicago Community Adult Health Study, Age 45+ (N=1225)

	Weighted Mean (SD) or Percent
Age	60.1 (11.3)
Male	43.9
White	42.7
Black	35.8
Hispanic	18.5
Lives alone	24.1
<b>Socioeconomic Position</b>	
Less than high school education	30.4
Income less than \$15,000	20.2
<b>Health Status</b>	
Number of chronic health problems	2.0 (1.8)
Any vision impairment	35.9
Any hearing impairment	32.7
Any difficulty walking 2-3 blocks	19.4
Any difficulty stooping, kneeling, climbing, etc.	66.0
<b>Social Participation</b>	
Social interaction frequency	3.9 (1.5)
Voted in last mayoral and/or federal election	79.2
Obtained preventive health care in past 2 yrs	50.2
Any health insurance	87.7



## Conclusions and Implications

- Social participation among adults with vision impairment and limitations in movement-related activities varies by characteristics in the urban environment (quality of street conditions, traffic volume, and residential security).
- Simple changes in urban built environments may go a long way to facilitate the full participation of all persons (of all ages) in society.
- Important to work with policy makers, politicians, urban planners, architects, and consumers, to disseminate findings and promote accessible environments for adults aging in place.

