


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



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Presenter Disclosures

Philippa Clarke

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:


No relationships to disclose

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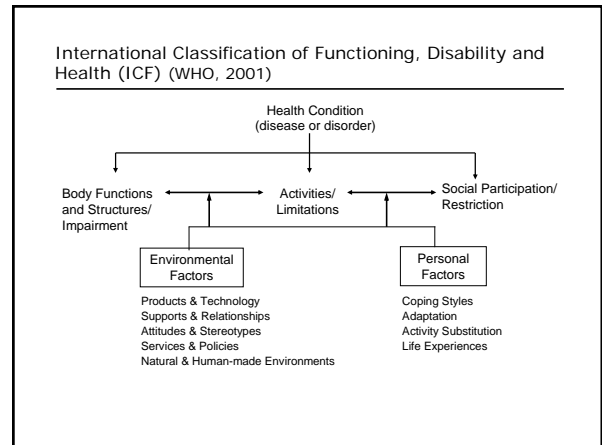
The Social Construction of Disability

“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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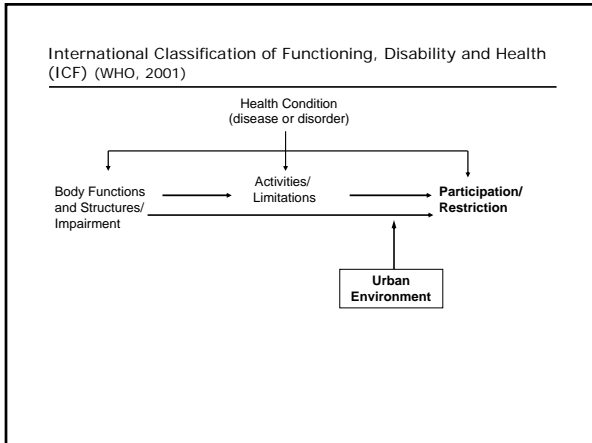


The Urban Environment in the Disablement Process

- ❑ Poor street conditions, heavy traffic, and excessive noise are associated with the onset of physical impairments (Balfour and Kaplan, 2002; Schootman, 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)
 - 3,105 individuals
 - aged 18 and over living in the city of Chicago
 - Analyses restricted to age 45+ (N=1195)
 - Face-to-face interviews (72% response rate)
 - Field period: May 2001- March 2003
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- ### Social Participation
- Social interaction ICFd9205
 - frequency of getting together with friends, neighbors, relatives
 - Voting ICFd950
 - voted in last federal and/or mayoral elections
 - Obtaining preventive health care ICFd5702
 - physical exam, blood pressure check, cholesterol check in past 2 yrs
 - Attending religious services ICFd9300
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- ### Impairment or Activity Limitation
- Vision impairment (even with glasses)
 - Hearing impairment (even with a hearing aid)
 - Cognitive impairment
 - Difficulty walking 2-3 blocks without help
 - Difficulty stooping, kneeling, climbing stairs, getting up from a chair (movement-related activity limitations index)
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Measures of Urban Environment

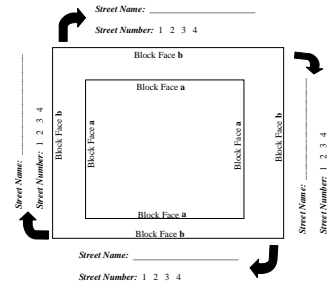
- Systematic Social Observation (SSO) (Reiss, 1971; Raudenbush & Sampson, 1999)
- Direct observational method
- Capitalizes on interviewer visits to homes: while walking through small respondent-centered neighborhoods, characteristics are documented using a standardized instrument
- E.g. presence of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

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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.



Street Conditions (SSO)

- Please Rate Condition of Street:
 - Very Poor (e.g. many 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, tract)

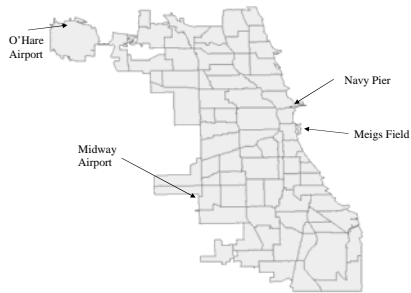
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Measures of Urban Context

- 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
- Presence of recreational facilities, parks, grocery stores, churches

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Chicago Neighborhoods



Census Tracts and Block Groups in Chicago



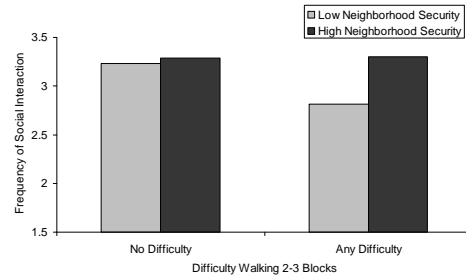
————— Census tract boundary ———— Block group boundary

Statistical Analyses

- Linear, Multinomial, 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)

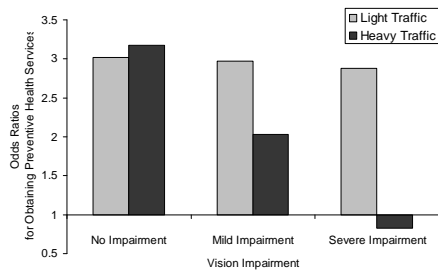
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Frequency of Social Interaction* by Difficulty Walking 2-3 Blocks and Residential Security (Block Group Level)



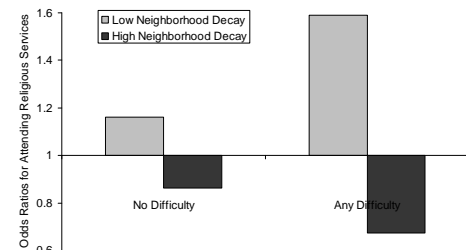
*With controls for age, gender, race/ethnicity, marital status, education, income, chronic health conditions, smoking, BMI, vision, hearing, cognition

Odds Ratios for Obtaining Preventive Health Services* by Vision Impairment and Volume of Traffic (Block Group Level)



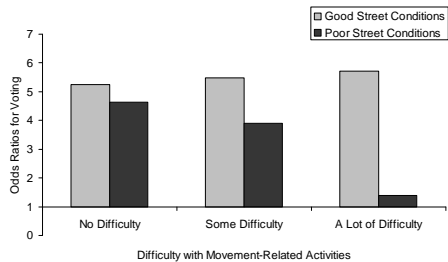
*With controls for age, gender, race/ethnicity, marital status, education, income, chronic health conditions, smoking, BMI, physical impairment, hearing, cognition, neighborhood security, neighborhood disorder, neighborhood decay, street conditions

Odds Ratios for Regularly Attending Religious Services* by Difficulty Walking 2-3 Blocks and Neighborhood Decay (Block Group Level)



*With controls for age, gender, race/ethnicity, marital status, education, income, chronic health conditions, smoking, BMI, vision, hearing, cognition, neighborhood security, number of churches in neighborhood

Odds Ratios for Voting* by Difficulty with Movement-Related Activities and Quality of Street Conditions (Tract Level)



*With controls for age, gender, race/ethnicity, marital status, education, income, chronic health conditions, smoking, BMI, vision, hearing, cognition, neighborhood disorder, neighborhood decay

Conclusions and Implications

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