

Longitudinal perspective of secondary conditions and community accessibility

in a predominantly African American group of women with mobility disability

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November 9, 2009

NIH Grant #R01HD052891



Overview

- “Obesity and the Built Environment: Building Health Empowerment Zones for People with Disabilities”
 - 5-year NIH grant
 - Two phases

Purpose

- Identify the type and severity of secondary conditions in a predominantly African American group of women with mobility disabilities; and
- Examine potential changes in secondary conditions in relation to community accessibility (e.g., transportation, built/natural environment, policies, etc.) over a 12-month period

Background

- Secondary conditions can have a substantial negative impact on the health of people with mobility disabilities.
- There is an urgent need to identify environmental factors that promote health and reduce the risk of secondary conditions in people with mobility disabilities.



Methods

- 219 adults with mobility disability living in a large urban setting
- Use assistive aid or difficulty walking one block
- Phone surveys at baseline, 6 months, and 12 months:
 - community accessibility
 - secondary conditions



Measurements

- Community Accessibility Survey

- Section 1:

- 8 environmental problems

- Questions on frequency (yes/no) and severity (1-5)

- Additional qualitative information

- Section 2:

- Influence of community features on an individual's participation in the community (1-5)

- Section 3:

- Occurrence of specific problems related to community participation (yes/no)

Built Environment



Public Transportation



Measurements

- Secondary Conditions
- 19 items
 - Each item asks about:
 - Presence of secondary condition (yes/no)
 - Severity (0-3)
 - Types of activities that are limited by the secondary condition.
 - In the community, home, daily living, social activities (yes/no)

Secondary Conditions

Muscular/ Physical	Motor Control	Neurologic	Metabolic	Urinary/ Bowel	Emotional
Pain	Difficulty leaving the home or getting around	Muscle Spasms	Blood pressure problems	Bladder problems	Depression
Fatigue	Falling	Spasticity	Problems managing weight	Urinary tract infections	Loneliness
Weakness		Contracture	Poor Appetite	Bowel Problems	Anxiety
			Sleep disturbance	Skin sores or ulcers	

Demographics

Demographics	Total Sample (N=219)	
	Mean	SD
Age (yr)	56.4	12.8
BMI (kg/m²)	36.1	12.3
	n	%
Gender		
Male	64	29.4
Female	154	70.6
Race		
AA	164	75.2
White	37	17.0
Hispanic	10	4.6
Other	7	3.2
Education		
High school or less	116	53.5
Some college	75	34.6
College graduate	26	12.0
Income		
<\$10,000	109	52.2
\$10,000-15,000	45	21.5
>\$15,000	55	26.3

Demographics (cont.)

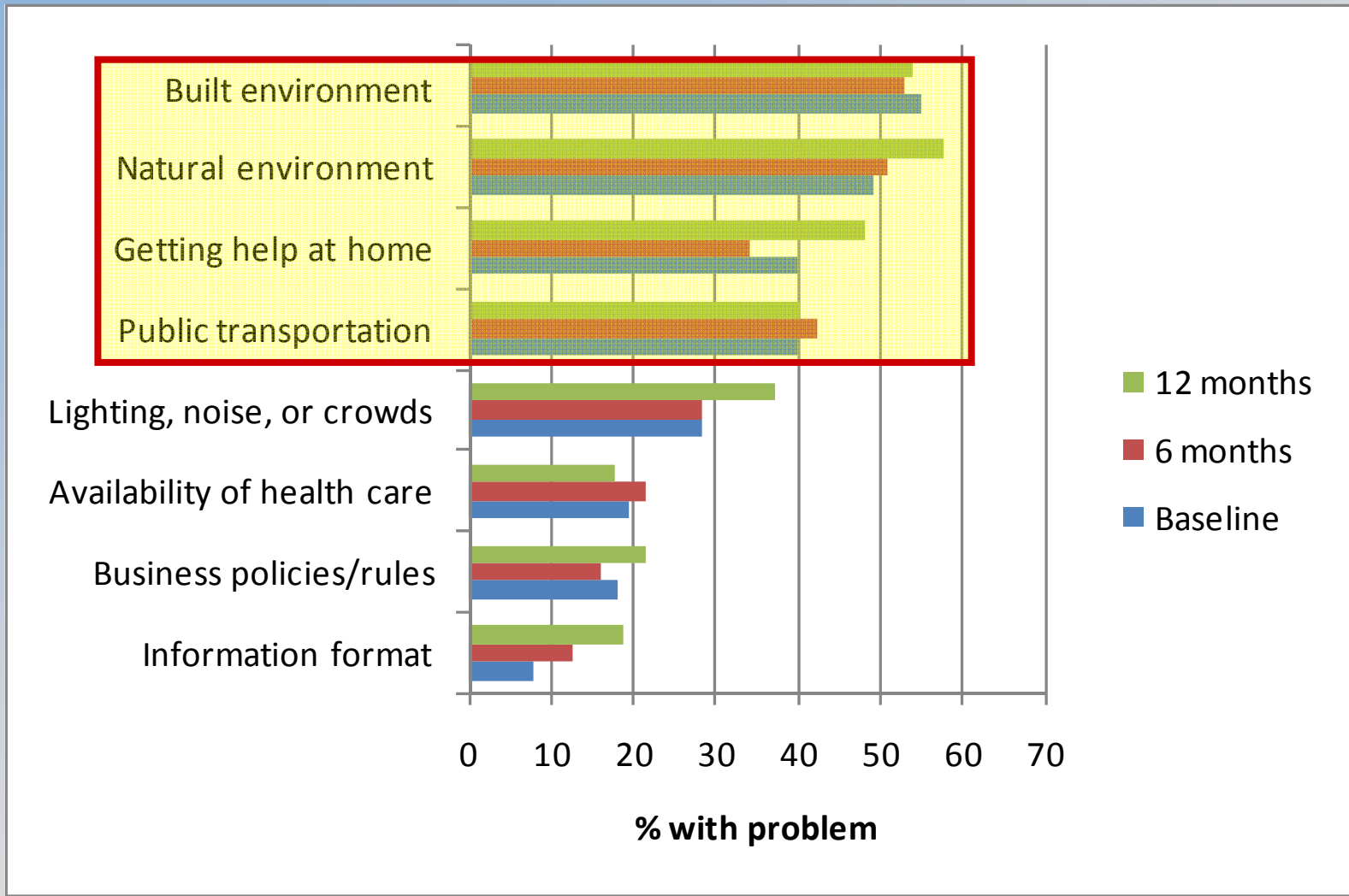
Demographics	Total Sample (N=219)	
	n	%
Primary disability		
Arthritis	50	22.8
Diabetes	22	10.0
Stroke	20	9.1
MS	14	6.4
Cerebral Palsy	12	5.5
Spinal injury	12	5.5
Other	87	39.7
Assistive device use		
Wheelchair	107	49.1
Walker	96	44.0
Cane	114	52.3

Instrument Reliability

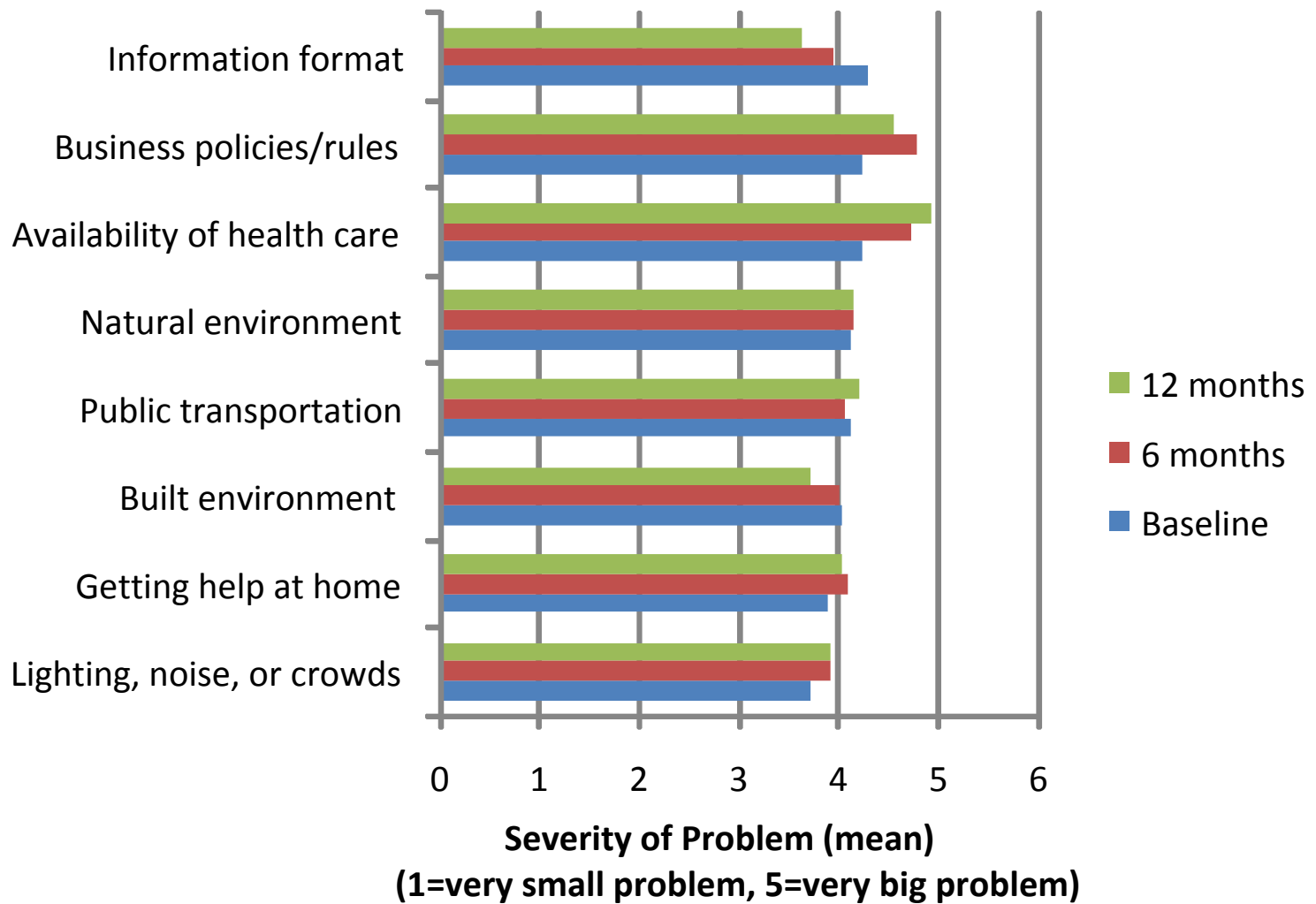
Cronbach's Alpha

<u>Instrument</u>	<u>Baseline</u>	<u>12 month</u>
CAS frequency scale (8 items)	0.64	0.70
CAS severity scale (8 items)	0.76	0.73
SC frequency score scale (19 items)	0.78	0.80
<u>SC severity score scale (19 items)</u>	0.89	0.91

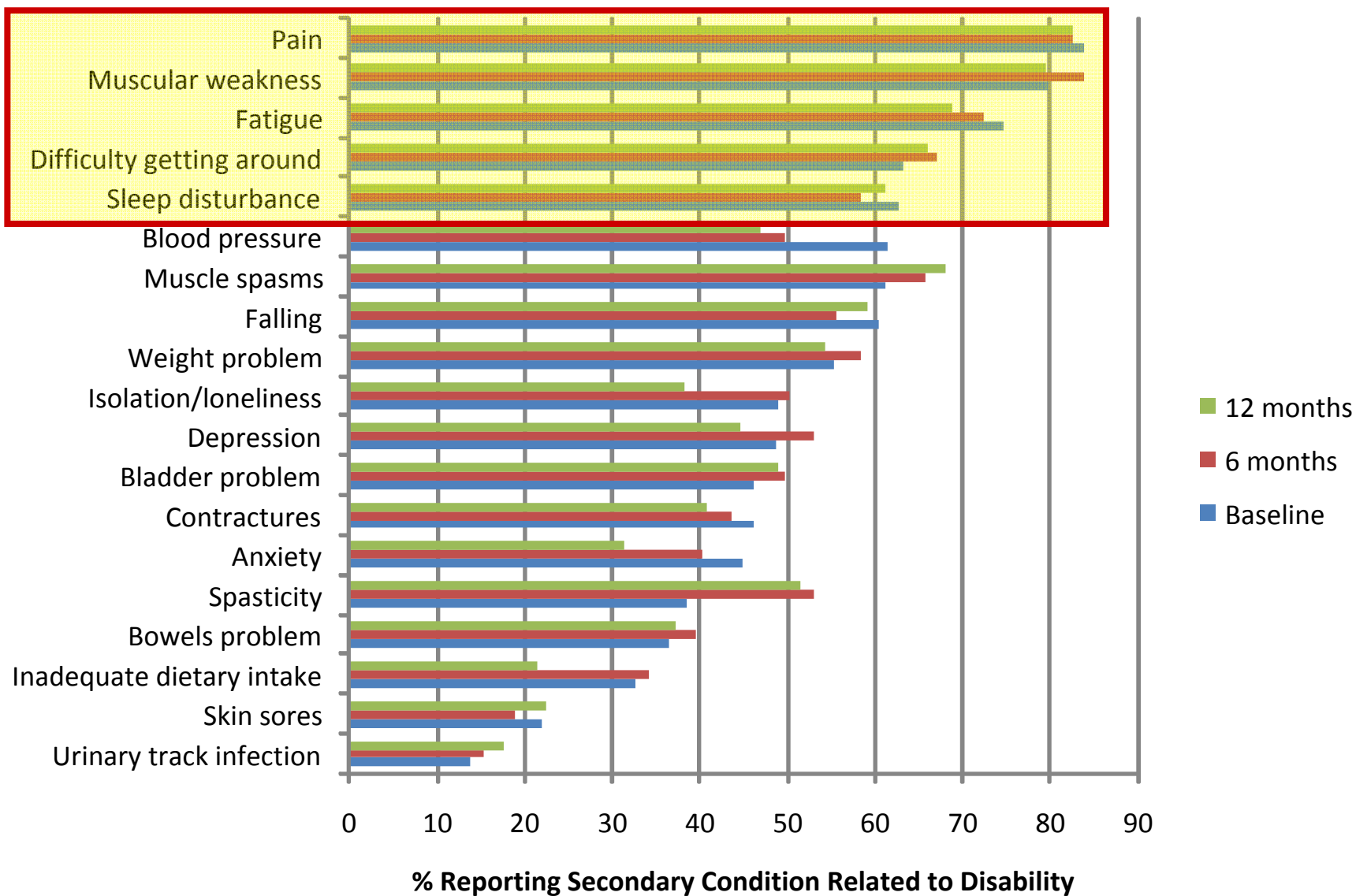
Community Accessibility



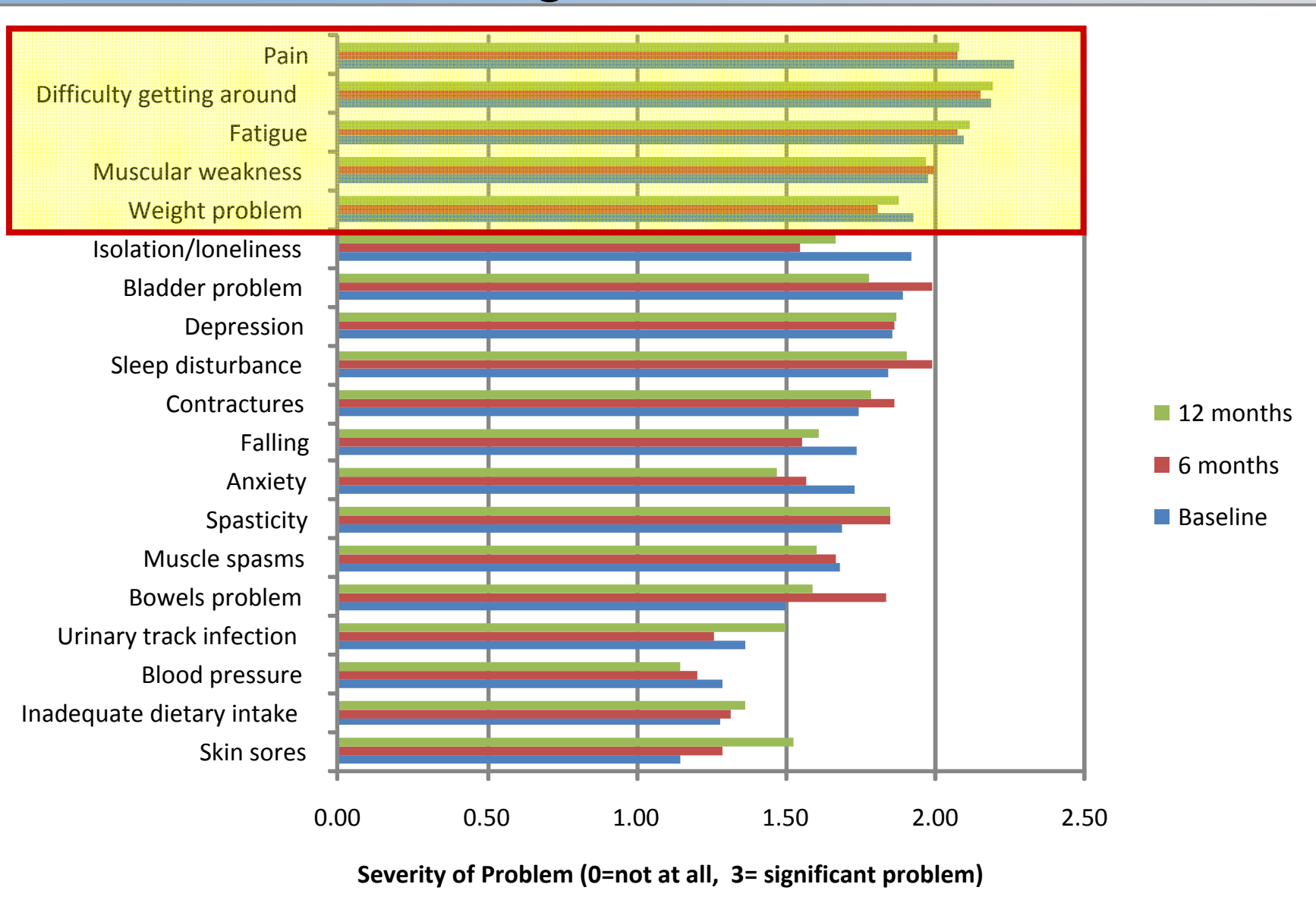
Community Accessibility



Secondary Conditions



Secondary Conditions

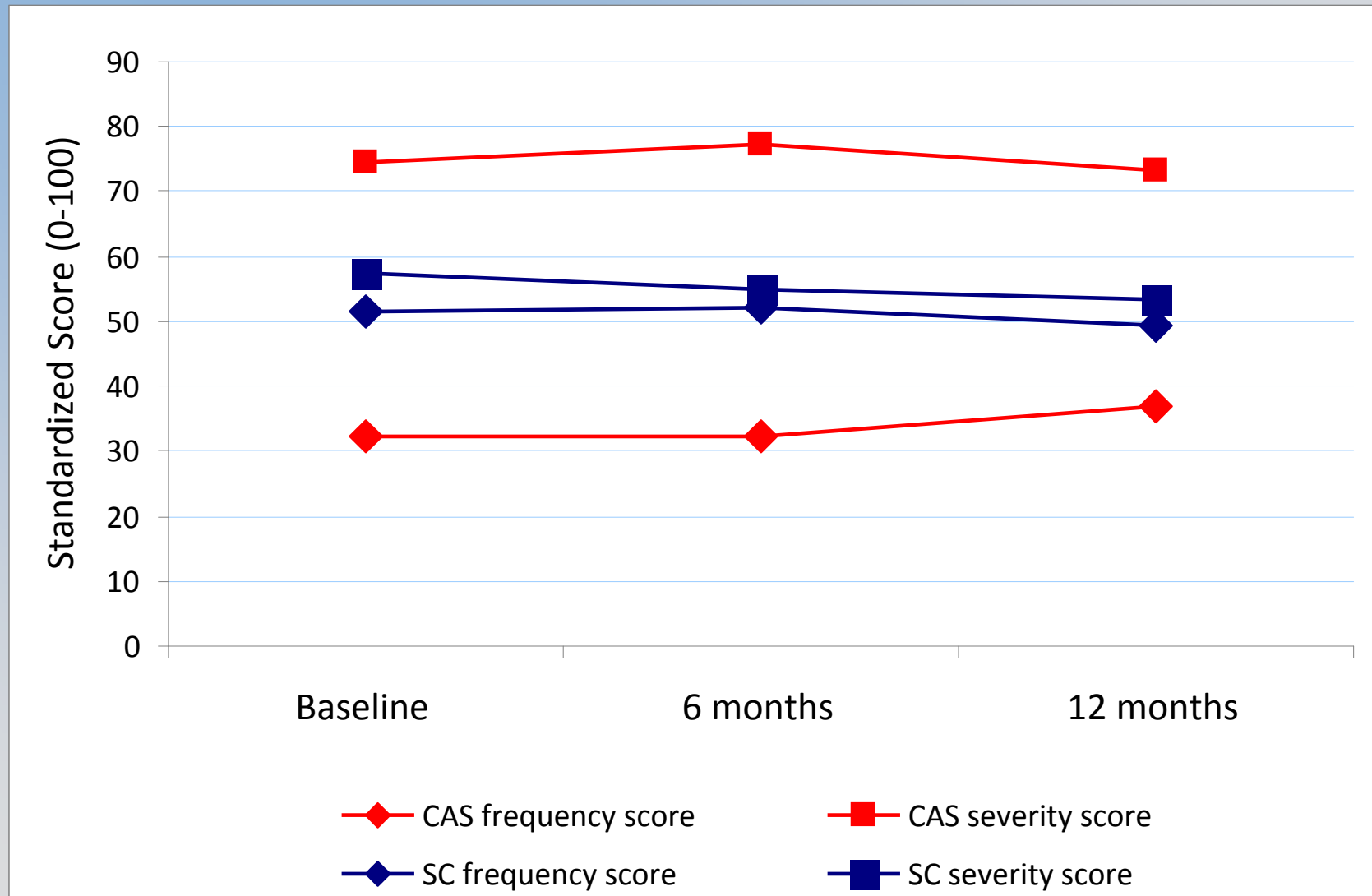


Correlations between Community Accessibility and Secondary Conditions

Variable	SC frequency score	SC severity score
Baseline		
CAS frequency score	0.39*	-
CAS severity score	-	0.14
6 months		
CAS frequency score	0.38*	-
CAS severity score	-	0.32*
12 months		
CAS frequency score	0.31*	-
CAS severity score	-	0.24*

*p<.05

CAS and SC Scores Across Time

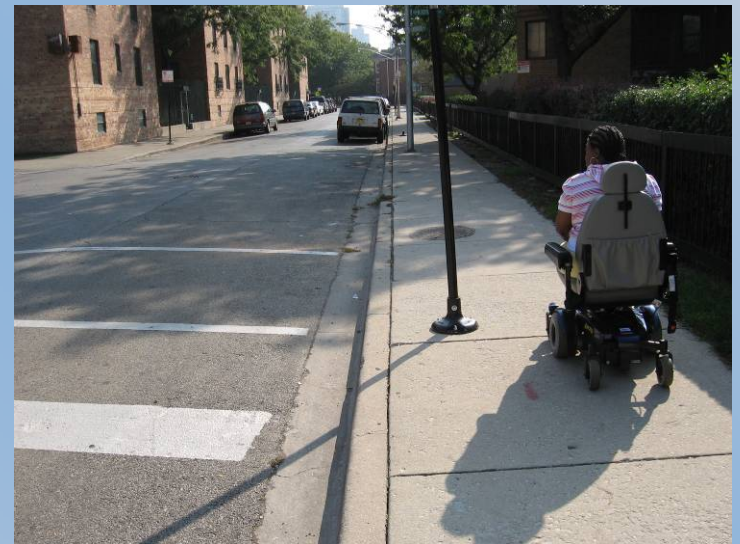
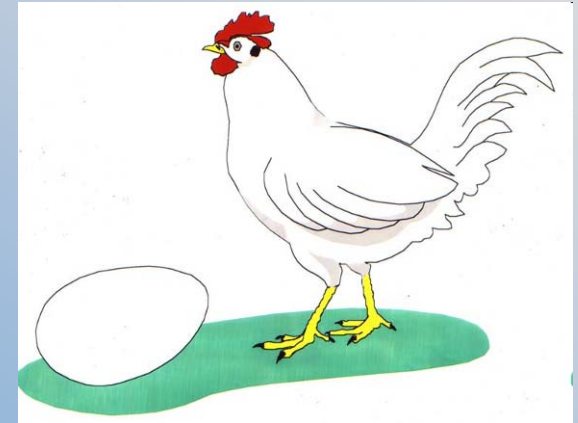


Regression Model on Change Score (from baseline to 12 months)

Predictor	Model 1		Model 2	
	Change score in SC frequency	Change score in SC severity	Change score in SC frequency	Change score in SC severity
	Standardized Coefficient	p value	Standardized Coefficient	p value
Age	1.45	0.1500	-0.68	0.5011
BMI	-0.31	0.7557	1.23	0.2218
Use of wheelchair	1.35	0.1787	-0.78	0.4352
Change score in CAS frequency	1.97	0.0522	n/a	n/a
Change score in CAS severity	n/a	n/a	2.09	0.0404

Conclusions

- Do secondary conditions predict problems with community accessibility or vice versa?
- Future prospective research should examine this relationship
 - Change in the environment (improving community accessibility)
 - Change in person (improving secondary conditions)



Conclusions

