Exploring the relationships among dimensions of collective efficacy, barriers to healthcare utilization, and having a regular doctor in low-income urban neighborhoods

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Presenter Disclosures

Alexis Jurow Stevenson has had no personal or financial relationships with commercial interests relevant to this presentation during the past 12 months.

Objectives

To assess how individual perceptions of collective efficacy are associated with barriers to healthcare utilization and with having a regular healthcare provider in an urban environment

Collective Efficacy[1]

- Defined through two constructs:
  - <u>Social Cohesion</u>: a sense of trust and shared values among community members
  - <u>Informal Social Control</u>: the perceived likelihood that neighbors will intervene for the common good

- Collective Efficacy has been linked to BMI and overall health

- Few studies have examined the link between collective efficacy and barriers to healthcare utilization

1. Sampson, R. J., S. W. Raudenbush; and F. Earls. 1997. Neighborhoods and violent crime: A multilevel study of collective efficacy. Science 277 (Aug 15): 918.

Project Overview – Queens Library HealthLink

- A five year, community based participatory research grant funded by the National Cancer Institute (Rapkin, PI, R01 CA119991-03)

- Cancer Action Councils formed in 20 low-income neighborhoods
  - Over 100 local CBO's, community residents and local business owners in Queens, NY

- Key partners:
  - The Albert Einstein College of Medicine of Yeshiva University
  - The American Cancer Society, Queens Region
  - The Queens Borough Public Library
  - The Queens Cancer Center

Project Overview, cont'd – Queens, NY

- Most ethnically diverse county in the United States

- Over 2.3 million residents
  - Over 100 languages spoken
  - 67% are of minority groups
  - 25% are not U.S. citizens
  - 27% speak little or no English
  - 47% are foreign-born

- Nearly 1 in 6 Queens residents lives in poverty

- A majority of residents have poor health literacy

- Higher rate of late-stage cancer detection than the rest of New York State

Methods – data collection

- Street intercept interviews
  - N = 5701 surveys, obtained May 2007-December 2009
  - 30-40 interviews gathered every 16 weeks in each of the 20 participating neighborhoods
  - Anonymous, between 7-15 minutes each
  - Fifty items about cancer screening, collective efficacy, awareness of neighborhood resources, health information sources, and cancer knowledge
- Languages of interviews have included:
  - English, Spanish, Mandarin, Cantonese, Korean, Hindi, Haitian Creole, and Russian

Methods – survey sites

Created by the New Americans Program, Queens Library (December, 2006)
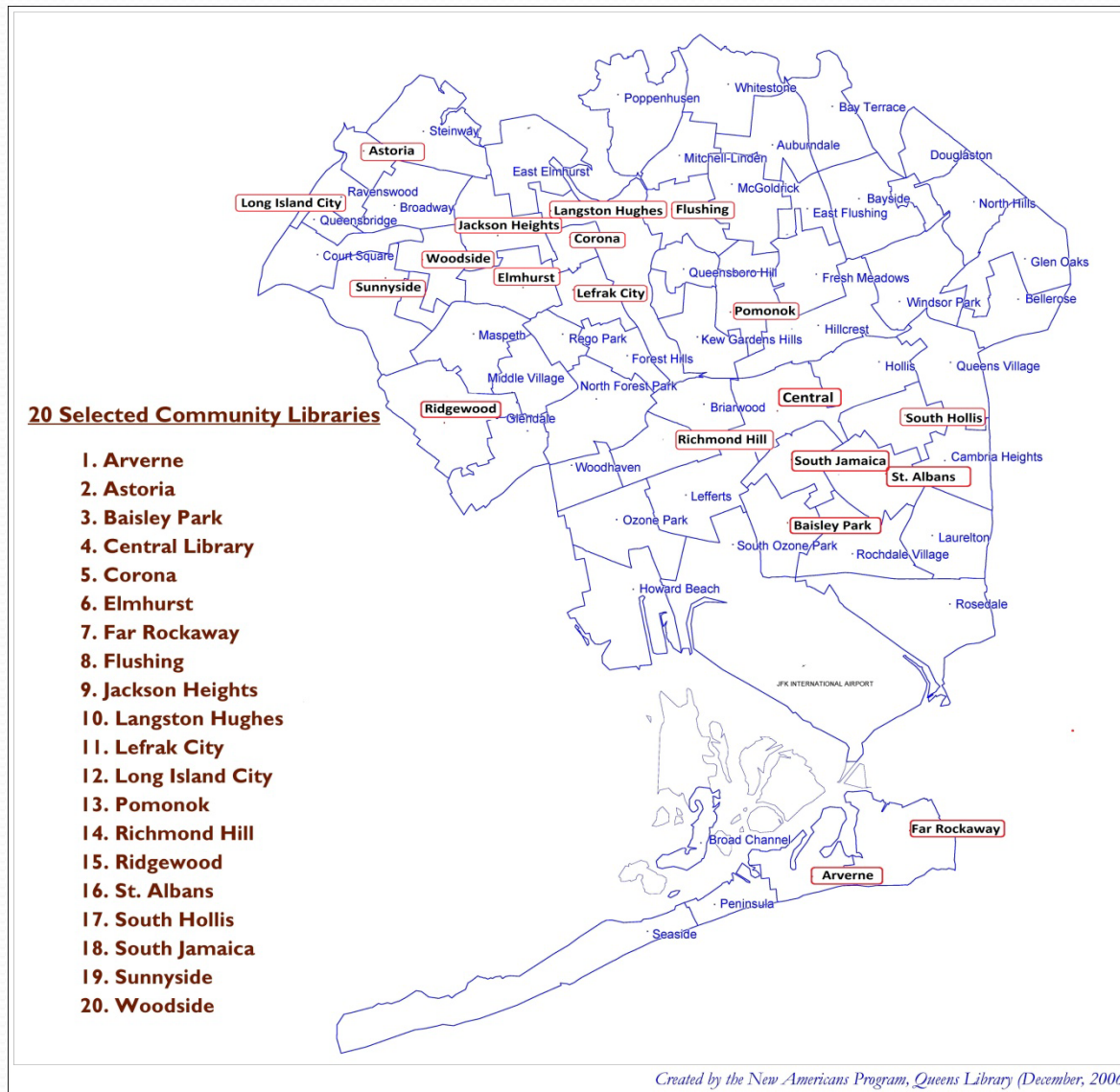
Methods – Measures (independent variables)

- Collective efficacy
  - Ten questions, each on a 5-point Likert-scale
  - Five questions were summed for social cohesion and five for informal social control

- Scores ranged from 5 (low social cohesion or informal social control) to 25 (high social cohesion or informal social control)

Methods – Measures (dependent variables)

- <u>"Barriers to healthcare utilization" item</u>
  - Has anything prevented you from seeing a doctor when you needed to in the past 12 months, such as cost, fear, not knowing where to go, language barriers, time, work, family commitments, or immigration status?

- <u>"Having a regular provider" item</u>
  - Do you have one person you think of as your personal doctor or health care provider? (*BRFSS 2005 3.2*)

Methods – Statistical modeling

- Logistic Regression using PASW/SPSS version 17

Model 1

Social Cohesion

Informal Social Control

Barriers to Healthcare Utilization

Model 2

Social Cohesion

Informal Social Control

Having a Regular Provider
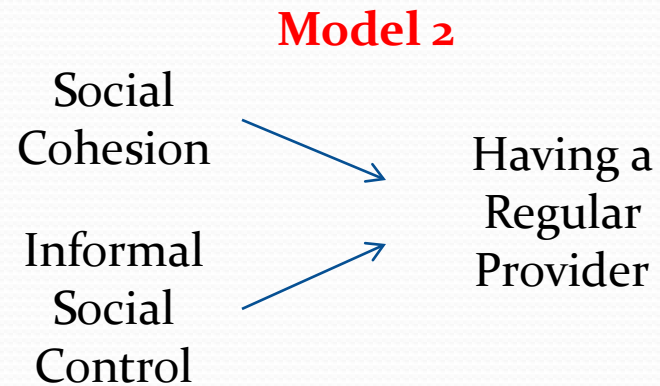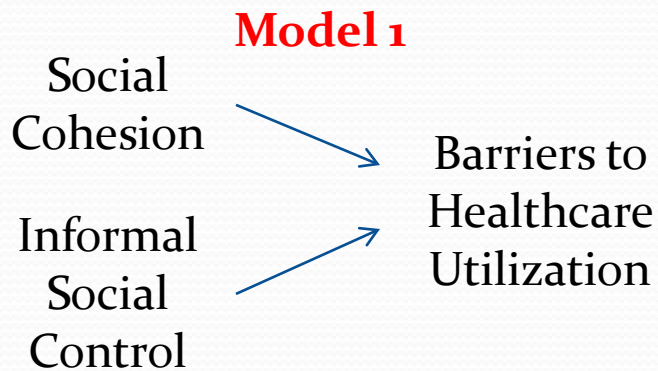
- Covariates included: race, gender, insurance status, foreign-born status, and having a high school education

Results – sample characteristics

Age	Number (N=5701)	Percent
Mean Age	46.3 years	-
Gender		
Male	2686	47.1%
Female	3013	52.9%
Race, ethnicity, and country of origin		
Black	1693	30.2%
White	1303	23.3%
Hispanic	189	33.8%
Asian	904	16.2%
Born in the United States	2486	43.6%

Results – "Having a regular provider" and "barriers to healthcare utilization"

"Having a regular provider" and "barriers to healthcare utilization"	Number (N=5701)	Percent
Have at least one regular provider	4445	78.0%
Participants prevented from seeing a doctor when they needed to in the past 12 months by at least one reported barrier	1109	19.5%

Results – Specific barriers to healthcare utilization (N = 1109)
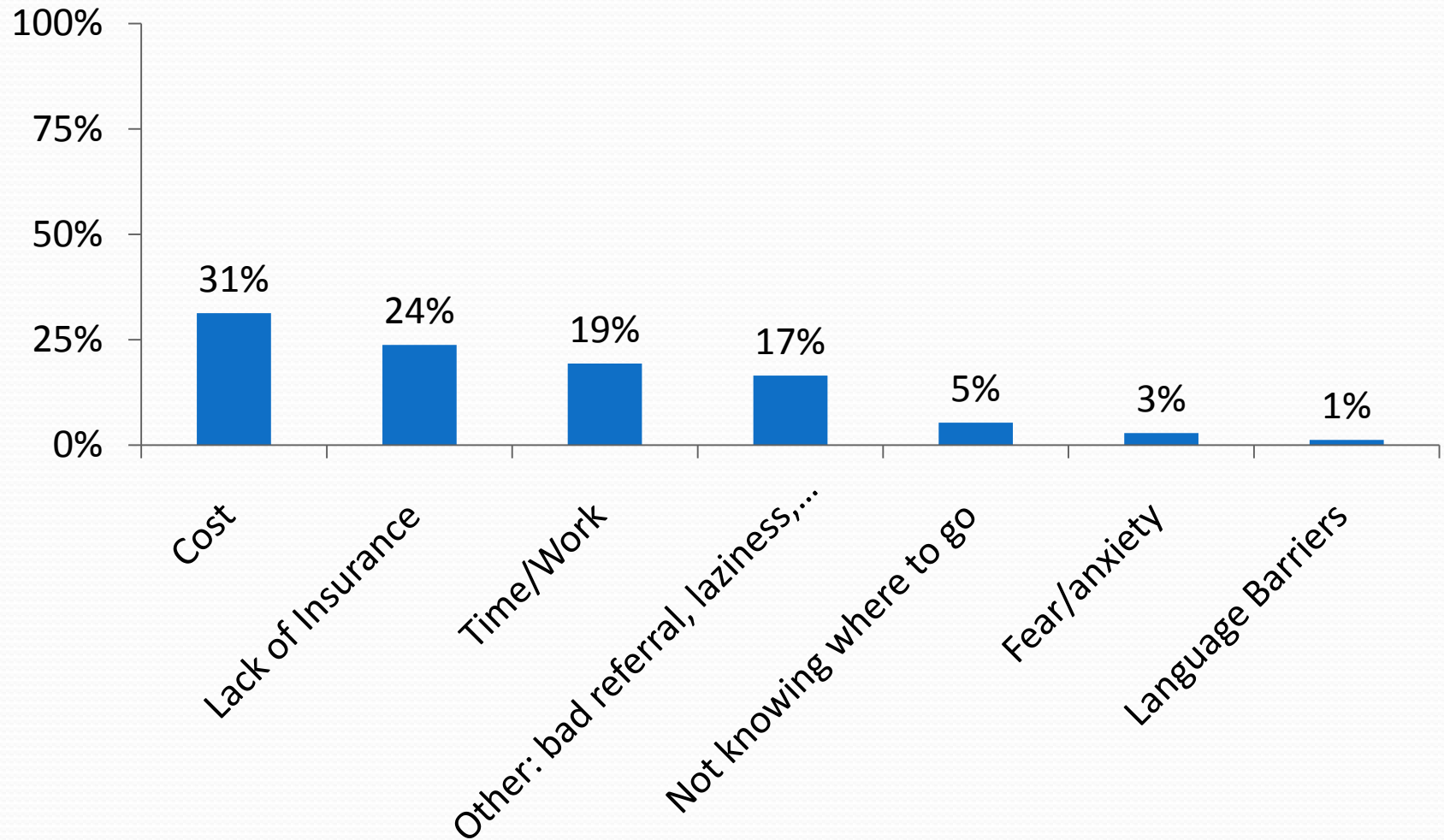
Results– Principal Components Analysis (N = 5701)

Item	Social Control	Social Cohesion
Children were spray painting graffiti on a local building	.754	.113
Children were showing disrespect to an adult	.720	.105
A fight broke out in front of their house	.692	.067
Children were skipping school and hanging out on a street corner	.660	.167
The fire station closest to their home was threatened with budget cuts	.566	.155
People in this neighborhood can be trusted	.153	.718
People around here are willing to help their neighbors	.241	.690
This is a close-knit neighborhood	.225	.652
Do neighbors get along	.061	.623
Do neighbors share the same values	.000	.525

Results – Logistic regression with "barriers to healthcare utilization" as the dependent variable

- A one unit decrease in **social cohesion** was associated with a 5% increase in the odds of encountering any barriers to healthcare utilization (OR= 1.05, p<.001).

- **Informal social control** had *no significant effect* on encountering healthcare barriers.

- Covariates: race, gender, insurance status, foreign-born status, and having a high school education

Results - Logistic regression with "having a regular provider" as the dependent variable

- **Social cohesion** had *no significant effect* on having a regular provider

- A one unit decrease in **informal social control** was associated with a 4% decrease in the odds of having a regular doctor (OR= 0.959, p<.001), even controlling for barriers to healthcare

- Covariates: race, gender, insurance status, and foreign-born status, having a high school education

Limitations

- Queens, NY is very unique
  - Densely populated, urban environment

- Very few controls given the large sample size
  - Other controls could have been average income level, age, average level of employment status

- Collinearity of variables not examined in-depth

- Limitations of cross-sectional analysis

Discussion

- These data suggest that collective efficacy and perceptions of social and built environments impact healthcare utilization and having a regular provider

- Results also indicate a complex relationship among these constructs

- CBPR approach is intended to foster community empowerment in such socially complex environments
  - Build community cohesion, leverage existing resources
  - Key issues: sustainability and expansion to enhance collective efficacy at the community level

Next research steps…

- Focus programs on increasing access to health insurance
  - The covariate that was statistically significant in both analyses: insurance status

- Outreach in Hispanic communities
  - Significantly lower rates of "having a regular healthcare provider"

- Support programs that increase neighborhood trust and cohesion

- Continued research in collective efficacy and health outcomes

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- Our Community Partners
  - Queens Library
  - Queens Cancer Center
  - American Cancer Society

- Our Queens Library HealthLink Project Student Interns

Results - Logistic regression and barriers to care

Logistic Regression-DEPENDENT: BARRIERS (with regular doctor, feel like a part of neighborhood)

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	SocialCohesion	.049	.012	15.916	1	.000	1.050	1.025	1.076
	SocialControl	-.002	.010	.056	1	.814	.998	.978	1.018
	HighSchoolEduc	.172	.095	3.265	1	.071	1.188	.986	1.432
	RegularProvider	-.551	.088	39.677	1	.000	.576	.485	.684
	H40aRaWh	-.028	.125	.050	1	.824	.973	.762	1.242
	H40cRaAs	.197	.137	2.087	1	.149	1.218	.932	1.592
	H40dRaBl	.018	.125	.020	1	.887	1.018	.797	1.300
	H41HpLat	.148	.112	1.740	1	.187	1.160	.931	1.445
	D19HIns	-1.044	.086	147.499	1	.000	.352	.297	.417
	FKnowAll	.093	.074	1.552	1	.213	1.097	.948	1.269
	BornInUS	.169	.090	3.508	1	.061	1.184	.992	1.412
	B05Sex	.044	.026	2.818	1	.093	1.045	.993	1.101
	B04Part (feel part of neighborhood)	.006	.006	1.119	1	.290	1.006	.995	1.018
	Constant	-1.345	.235	32.720	1	.000	.261		

a. Variable(s) entered on step 1: SocialCohesion, SocialControl, HighSchoolEduc, RegularProvider, H40aRaWh, H40cRaAs,
H40dRaBl, H41HpLat, D19HIns, FKnowAll, BornInUS, B05Sex, B04Part.

Results - Logistic regression and having a regular provider

Logistic Regression-DEPENDENT: REGULAR DOCTOR (with barriers, feel like a part of neighborhood)

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	SocialControl	-.042	.011	15.454	1	.000	.959	.939	.979
	HighSchoolEduc	.202	.094	4.670	1	.031	1.224	1.019	1.470
	SocialCohesion	-.004	.013	.112	1	.738	.996	.971	1.021
	BornInUS	.088	.094	.872	1	.351	1.092	.908	1.314
	H40aRaWh	.130	.130	1.002	1	.317	1.139	.883	1.469
	H40cRaAs	.093	.143	.425	1	.515	1.098	.829	1.454
	H40dRaBl	.193	.132	2.159	1	.142	1.213	.938	1.570
	H41HpLat	-.256	.116	4.840	1	.028	.774	.617	.972
	D19HIns	2.045	.079	662.981	1	.000	7.733	6.618	9.036
	F20Prev-barriers	-.565	.087	42.155	1	.000	.568	.479	.674
	B05Sex	.173	.076	5.241	1	.022	1.189	1.025	1.380
	B04Part (feel part of neighborhood)	-.006	.006	1.033	1	.310	.994	.981	1.006
	Constant	.211	.257	.671	1	.413	1.235		

a. Variable(s) entered on step 1: SocialControl, HighSchoolEduc, SocialCohesion, BornInUS, H40aRaWh, H40cRaAs, H40dRaBl, H41HpLat, D19HIns, F20Prev, B05Sex, B04Part.