

# The Association Between Perceived Discrimination and Asthma Outcomes Among Urban Adults

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# Background

- Disparities in health care prevail and persist
- Disparities occur in a context in which evidence of discrimination exists
- Discrimination operates as a factor both at a system level and at the patient level

# **CHICAGO INITIATIVE TO RAISE ASTHMA HEALTH EQUITY (CHIRAH)**

Collaboration between Northwestern  
University, Feinberg School Of Medicine  
and John H. Stroger Hospital Of Cook  
County

Funded by The National Heart, Lung, And  
Blood Institute\*

\*5U01HL072478-04

# CHIRAH Study

Hypothesis: Life stress, mental health, self-efficacy, coping, social support and asthma schema influence asthma health status

Aim: identify factors and develop intervention strategies to reduce disparities in asthma outcomes



# CHIRAH Study -Methods

- Elementary school based screening of families for asthma
- Recruitment of Adults with persistent asthma (use of asthma medications for at least 8 weeks in the preceding year)
- Face to face baseline interviews

# Measures - Perceived Discrimination

- Modified Experience of Discrimination Questionnaire (Kreiger)
  - Lifetime experience racial discrimination at school, work, getting a job, housing, getting medical care, with police/in the courts
- Crisis in Family Systems (CRISYS-R)
  - Unfair treatment last 6 months based on age, sex, race or lack of money
- Encountered racism in the doctor's office, last 6 months

# Measures - Asthma Health Outcomes

- Mini Juniper Asthma Quality of Life Questionnaire (15 items)
- Total symptoms days + night in preceding 2 weeks
- Emergent hospitalizations last 12 months
- Emergent outpatient care (ED visits and office visits) last 12 months

# Baseline Demographics (n=353)

	N (%)
Age (mean. range)	31 (18-41)
Female	276 (78)
African-American/Black	198 (56)
Hispanic/Latino	99 (28%)
Other/White/Asian	54 (15%)
High School or higher	292 (83)
Employed for pay	217 (62)
Income <30K	175 (50)

# Prevalence Perceived Discrimination

	YES, 1 item		Yes, $\geq 50\%$ items
	%	n	
Kreiger	57	193	
CRISYS			
Racism Medical Office	2.8	10	

# Correlation Coefficients

	AQOL	Symptoms	Hospital	Outpatient
Kreiger housing	.117*	--	--	--
CRISYS money	.119*	--	--	--
Office	--	--	-.153**	-.132*

\* p = .05

\*\* p = .01

# Discrimination and AQOL

## Tests of Between-Subjects Effects

Dependent Variable: Mean Juniper score corrected for missing answers

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	96.087 <sup>a</sup>	14	6.863	5.345	.000
Intercept	238.869	1	238.869	186.035	.000
ADISC_4x	2.742	2	1.371	1.068	.345
AEDULIT4	16.817	3	5.606	4.366	.005
AETHNIC2	13.102	2	6.551	5.102	.007
AINCOME4	22.447	5	4.489	3.496	.004
ASEX	6.725	1	6.725	5.237	.023
AAGE	2.201	1	2.201	1.715	.191
Error	431.424	336	1.284		
Total	7210.417	351			
Corrected Total	527.511	350			

a. R Squared = .182 (Adjusted R Squared = .148)

# Discrimination and Urgent Care Visits

## Tests of Between-Subjects Effects

Dependent Variable: Total # of asthma exacerbations requiring outpatient care in past 12 months

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	640.447 <sup>a</sup>	11	58.222	7.451	.000
Intercept	26.523	1	26.523	3.395	.066
AAGE	38.297	1	38.297	4.901	.027
AEDULIT4	463.179	4	115.795	14.820	.000
AEXP19	354.188	3	118.063	15.110	.000
AEDULIT4 * AEXP19	324.230	3	108.077	13.832	.000
Error	2664.419	341	7.814		
Total	4638.000	353			
Corrected Total	3304.867	352			

a. R Squared = .194 (Adjusted R Squared = .168)

# Limitations

- Self-reported data
- Lack of objective measure of stress

# Conclusions

- Perceived Discrimination is prevalent in a population of adults with symptomatic asthma
- It is associated with asthma specific QOL, hospitalizations and urgent outpatient care

# Significance

- May be important to include measurements of discrimination in the study of asthma health outcomes
- May be important to address perceived discrimination in the design of intervention strategies

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