

CAM Use in Childhood Asthma: The Role of Culture & Acculturation



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Health Disparities in Asthma



Ethnic Disparities in Asthma

Interesting paradox:

**Current asthma prevalence is highest
among Blacks (10.2%), followed by
Whites (7.6%), and Latinos (6.8%)**

BUT

**If we sub-divide the Latinos into Puerto
Rican and Mexican we find....**

Ethnic Disparities in Asthma

- Puerto Rican (PR) children disproportionately affected (**14.1%**) compared to:
- African American (10.2%)
- American Indian (9.9%)
- White (7.6%)
- Mexican (**5.8%**)
- Asian (4.9%)

Health Disparities in Asthma

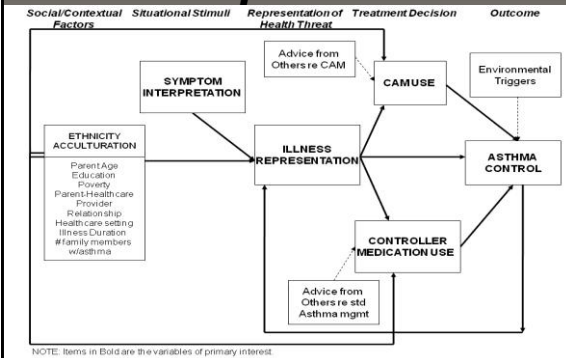
If we had simply examined prevalence by race, we would have overlooked the fact that PR children fare worse than any other ethnic sub-group.

WHY???????

State of Current Research

- Few studies found in the literature making direct comparisons between Mexican and Puerto Rican adults and children with asthma
- Primarily focused on descriptive differences between these groups
- No studies have utilized growth models to identify the sociodemographic, cultural, environmental, and contextual pathways

Conceptual Model



Illness Representations



Illness representations determine:

- View cause/severity of illness
- Manage the illness
- Seek health care
- Adhere to Tx regimens



Illness Representations

Professional model:

- Asthma is a chronic disease
- Disease is present even when asymptomatic
- Readily controlled w/daily medication use w/goal of becoming symptom-free

Illness Representations

Lay model:

- Asthma is acute, episodic
- Unpredictable
- Not readily controlled
- Goal is to become medication-free

Illness Representations

Lay model IRs are predictive of medication non-adherence

Factors associated with lay model IRs:

- Poverty
- Ethnic minority
- Low education

Illness Representations

- Differences in IRs between Mexican and PR families not well understood
- Few studies make direct comparisons
- Primarily focused on descriptive differences between these groups

Acculturation

- Effect of acculturation for Latinos in the U.S. on health behaviors and outcomes is complex; the mechanisms not well understood; and the results, mixed



Acculturation

Acculturation may play a role in:

- asthma health outcomes
- perceptions of health
- illness representations
- CAM and controller medication use
- barriers to accessing healthcare

Acculturation

- Acculturation may differentially affect Mexican and Puerto Rican children with asthma.
- Higher acculturation among Puerto Rican children is protective.
- Less-acculturated Mexican families have better health outcomes than more acculturated families.

Acculturation

- Evidence mixed on relationship between acculturation and access to healthcare
- Higher acculturated Latinos more likely to have health insurance and access to care

BUT

- Others found no relationship between acculturation and access to healthcare after controlling for age, sex, marital status, insurance, employment, and medical need



Complementary and Alternative Medicine in Asthma



CAM in Asthma

- Parents' desire for children to be medication-free may lead to CAM use
- Trend of increasing CAM use in US
- Few studies conducted on CAM use in children
- Even fewer among children with asthma

CAM in Asthma

- 5435 children from the Asthma Callback Survey 2006-2008
- 26.7% of children had used CAM in the past 12 months
- Breathing techniques (58.5%), vitamins (27.3%), and herbal therapies (12.8%) most frequently used CAM

Shen & Oraka, 2012

CAM in Asthma

Most common among children with:

- Poorly controlled asthma (aOR=2.0)
- Public insurance (aOR=1.5)
- Cost barrier for asthma care (aOR=1.7)

Shen & Oraka, 2012

CAM

- Use of CAM differs by acculturation & ethnicity
- Mexican families more likely to use folk remedies compared to mainland Puerto Rican families
- Less acculturated Puerto Rican families (island-dwelling) endorse biologically-based, herbal, manipulative & body-based CAM more frequently than mainland Puerto Rican families.

Study Aims

Two broad aims:

1. Are there differences in IRs between Mexican & PR parents due to social & contextual factors?
2. Are disparities in asthma control between Mexican and PR children due to differences in parents' treatment decisions & changes in IRs over a 1 year period

Study Design & Methods

- 1 year longitudinal study
- Interviews & child pulmonary function tests: baseline and 3, 6, 9, & 12 months.
- Medical record reviews @ 12 months
- 300 Mexican & PR mothers & 300 children ages 5–12 w/asthma
- 2 school-based health centers & Breathmobile in Phoenix, AZ & 1 pediatric asthma & allergy clinic in Bronx, NY

Preliminary Results – Sample

Variable	Mexican (N=147)	Puerto Rican (N=64)	Test of Significance
	N (%)	N (%)	
Married	83 (56.5)	21 (32.8)	.002
High School Graduate	71 (48.3)	39 (60.9)	NS
Poor	97 (66.0)	20 (31.3)	<.0001
US Born	11 (19.6)	45 (80.4)	<.0001
Any CAM Use (% Yes) - Global	28 (19.1)	7 (10.9)	NS
Any CAM Use (% Yes)- Structured	107 (72.8)	53 (82.8)	NS
Current CAM Use (% Yes)	80 (54.4)	45 (70.3)	.03

Preliminary Results – Sample

Variable	Mexican (N=147)	Puerto Rican (N=64)	Test of Significance
	N (%)	N (%)	
OTC Meds for Asthma (% Yes)	48 (32.7)	16 (25.0)	NS
Disclosed CAM Use (% Yes)	22 (15.0)	27 (42.2)	<.0001
Mom CAM Use - Lifetime	25 (17.0)	10 (15.6)	NS
Mom CAM Use – Current	16 (10.9)	6 (9.4)	NS
CAM Used INSTEAD of Meds	4 (2.7)	3 (4.7)	NS
CAM Used WITH Meds	83 (56.5)	43 (67.2)	NS

Preliminary Results – Sample

Variable	Mexican (N=147)	Puerto Rican (N=64)	Test of Significance
	Mean (SD)	Mean (SD)	
Parent Age	34.86 (6.1)	38.93 (10.7)	.009
Child Age	9.6 (2.2)	9.4 (2.3)	NS
Asthma Control Test	22.6 (7.1)	28.4 (8.6)	<.0001
Dominant Society Immersion (SMAS)	2.96 (0.4)	3.37 (.43)	<.0001
AIRS Total Score	2.9 (0.4)	3.0 (0.3)	NS
Asthma Duration (Months)	66.5 (40.0)	91.6 (30.9)	<.0001
Parent-HCP Relationship	3.7 (0.6)	3.7 (0.6)	NS

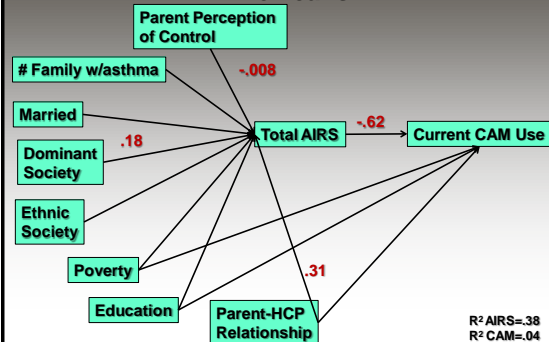
Preliminary Results – Path Analysis

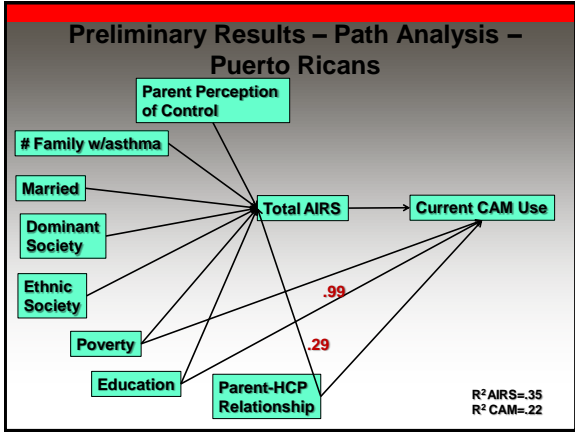
AIRS: # family members w/asthma, married, poverty, education, asthma control, HCP relationship, acculturation

CURRENT CAM USE: poverty, education, AIRS, HCP relationship

Model Fit: RMSEA=.05, CFI=.96, TLI=.86

Preliminary Results – Path Analysis - Mexicans





Thank you!

QUESTIONS?