

Prevalence of and Factors Associated with Overweight & Obesity among Chinese American Children 6-19 years in NYC

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Background

- Prevalence of childhood obesity in the US has tripled since the 1980's
- The National Health and Nutrition Examination Survey (NHANES) from 1999-2002 found 65% of adults are **at risk for overweight** or **obese**
- In the same study, among children aged 6-19 yrs, 31% were found **at risk for overweight** or **overweight**

Background Research Data

- In 2003 NYC Department of Health and Mental Hygiene (NYC DOHMH) found that 21% of kindergarten children in NYC public schools were overweight
- In 2004 NYC DOHMH recorded 27% of preschool children in the Head Start Program to be overweight
- In 2005 a study of community health centers in medically underserved areas found 18% of Asian American children overweight. This rate was as common as other ethnic/racial groups in similar setting.

Study Aim

- To document the prevalence of **at risk for overweight and overweight** Chinese American children cared for by Charles B Wang Community Health Center (CBWCHC) in NYC
- To determine if there are any characteristics that are associated with being overweight for Chinese American children
- To gather baseline data for future planning and determination of program needs in prevention and management of obesity in this population.

Definitions used

Center for Disease Control (CDC) in 2000 defined for children 2-21 yrs:

- At risk for overweight** is defined as at or above the 85th percentile but less than the 95th percentile of the sex-specific BMI for age
- Overweight** is at or above the 95th percentile for the sex specific BMI-for-age

Methods and Data Analysis

- Design:** Cross-sectional retrospective chart review
- Subjects:** Chinese American children age 6-19 years who came for annual physical exam at CBWCHC in 2004
- Data collected:** Date of birth, date of visit, birthplace, weight, height, and gender
- IRB:** Approved by New York Downtown Hospital IRB
- Analysis:** SPSS 11.0
 - Calculated frequency distributions of categorical data (i.e. gender, birthplace, age category)
 - Assessed possible associations between demographic attributes and prevalence of overweight and at risk for overweight

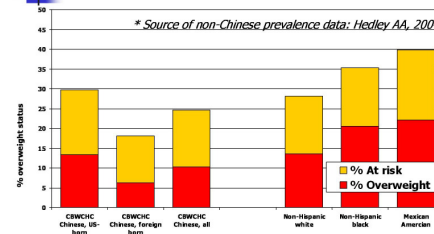
Results:

Prevalence: Subgroups

Sex	Age (years)	At risk for Overweight and Overweight (BMI ≥ 85%)						Overweight (BMI ≥ 95%)					
		All		US born		Foreign born		All		US born		Foreign born	
All	6-19	1,150	24.64%	776	29.80%	374	18.12%	477	10.22%	347	13.33%	130	6.30%
	6-11	630	30.81%	491	32.84%	139	25.27%	293	14.33%	235	15.72%	58	10.55%
	12-19	520	19.82%	285	25.70%	235	15.52%	184	7.01%	112	10.10%	72	4.76%
Boys	6-19	782	32.09%	507	37.44%	275	25.39%	349	14.32%	242	17.87%	107	9.88%
	6-11	424	38.72%	322	40.05%	102	35.05%	210	19.18%	165	20.52%	45	15.46%
	12-19	358	26.68%	185	33.64%	173	21.84%	139	10.36%	77	14.00%	62	7.83%
Girls	6-19	368	16.49%	269	21.52%	99	10.09%	128	5.74%	105	8.40%	23	2.34%
	6-11	206	21.68%	169	24.46%	37	14.29%	83	8.74%	70	10.13%	13	5.02%
	12-19	162	12.65%	100	17.89%	62	8.59%	45	3.51%	35	6.26%	10	1.39%

Results:

CBWCHC Sample vs. NHANES 1999-2002



Results:

Sample Demographics

N = 4712	
Age	6-11 years: 43.6% (n=2055) 12-19 years: 56.0% (n=2640)
Sex	Boys: 52.1% (n=2454) Girls: 47.9% (n=2256)
Birth place	US: 55.5% (n=2616) Foreign: 44.0% (n=2071)
Site of medical care	Chinatown: 75.8% (n=3574) Flushing: 24.2% (n=1138)

Results:

Significant Findings

- Combined prevalence of being **at risk for overweight** or **overweight** is 24.6% (BMI ≥ 85%)
- Children born in the US more likely to be **at risk for overweight** or **overweight** than those foreign-born (29.8% vs 18.2%, p<0.001)
- Younger children aged 6-11yrs more likely to be **at risk for overweight** or **overweight** than older aged 12-19yrs (30.9% vs 19.8%, p<0.001)
- Boys more likely to be **at risk for overweight** or **overweight** than girls (32.2% vs 16.6%, p<0.001)
- Prevalence of Chinese boys aged 6-19 yrs **at risk for overweight** or **overweight** (32.2%) comparable to that of non-Hispanic white males (29.2%) and the national average (31.8) for this age/sex cohort

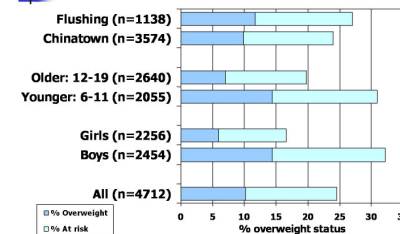
Conclusions:

Implications & Next Steps

- Childhood obesity is common in the Chinese American community, especially among boys, those who are younger, and those born in the U.S.
- Future studies are needed to identify factors related to assimilation and acculturation that may contribute to the increased obesity rates in the Chinese American children.
- Effective interventions may need to address cultural specific issues of this community that may contribute to the higher rates of obesity in young boys.

Results:

Prevalence of Overweight Status by Subgroups



Conclusions:

Current Services at CBWCHC

- CBWCHC Pediatric Services adopted the AAP Guidelines for the Screening and Management of Obesity (2004)
- Multidisciplinary team to design/discuss clinical protocols/interventions/tools (2005)
- Community workshops on nutrition (2006)
- Collaboration with NYC Parks for exercise programs (2006-07)

Acknowledgements:

The investigators wish to thank Kimberly Cheng, Wayne Cheung, Johnson Tsui, and the Medical Records staff for their valuable contribution to the study.