Cultural Competency in Obesity

- Define
- Epidemiology
- Cultural Subgroups
- Contributing factors
- Interventions
What is it??

Culture

➢ The whole human behavior

- Ideas
- Attitudes
- Relationship styles
- Speaking styles
- Language

- Belief
- Etiquette
- Law
- Morals
- Entertainment
- Education
Culture

- Unifying beliefs of any group of people of similar religion, values, attitudes, ritual practices, family structure, language or mode of social organization
- Pervades all lives and shapes identity
- Socializes its members on how to perceive the universe
- Has the most influence on a patient's behavior
Cultural Competency

- **What is it?**
  - An effort to understand those aspects of the human condition that differentiate individuals and groups
  - An integral part of the overall effort to respond well to persons in need

- **Why do we care?**
  - These differences sometimes have an overpowering effect on the health and medical care of individuals and groups

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Is It Really That Important?
Importance

- Perception of illness and disease varies by culture.
- Diverse belief systems exist on health, healing and wellness.
- Affects relationships with physicians and other providers.
- Patients seek complementary and alternative health services.
- There is a shortage of minority or culturally diverse physicians.

What Isn’t It?
Cultural Competency

- What it is not!
  - Racism
  - Bigotry
  - Political correctness
  - Chauvinism
  - Paternalism
  - Stereotyping

Cultural Competency in Obesity

- So, what does this mean in the management of Obesity?
- People are different
  - Cultural / ethnic food choices
  - Food availability
  - Family environment
  - Body shape preferences
  - Metabolism differences
  - Socioeconomic differences
  - Physical Activity
Lessons From the Epidemic in The United States

Between 1980 and 1999 the prevalence of obesity increased from 13% to 27% among U.S. adults.

Prevalence of class 3 obesity (BMI ≥ 40)
- “Morbid Obesity” 2 fold higher risk for all cause mortality
- Increased from 1% to 3% between 1960 and 1994

* Behavioral Risk Factor Surveillance System 1990-2000
The Fattening of America
Percentage of overweight and obese adults in the United States, 1962-2000


(∗Approximately 30 pounds overweight)
In Our Children?

Obesity in the United States

- Truly a “pandemic” in our children
- Prevalence of “overweight” status 2000
  - 15.5% 12-19 yrs
  - 15.3% 6-11 yrs
  - 10.4% among 2-5 yrs
- Increased from 1994
  - 10.5% 12-19 yrs
  - 11.3% 6-11 yrs
  - 7.2% 2-5 yrs
- Exceeding prevalent in certain cultural groups

* National Health and Nutrition Examination Survey NHANES, 1999-2000
A recent Journal of the American Medical Association study conducted by the National Health and Nutrition Examination Survey found the number of overweight and obese adults and children in the United States has continued to rise, after being relatively stable from 1960 to 1980. The chart compares the percentage of overweight and obese people from 1999 to 2000 with the results of those who were studied from 1988 to 1994.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Overweight</td>
<td>55.9%</td>
<td>64.5%</td>
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<tr>
<td>Obese</td>
<td>22.9%</td>
<td>30.5%</td>
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<tr>
<td>Extremely obese</td>
<td>2.9%</td>
<td>4.7%</td>
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<tr>
<td>2 to 5-year-olds</td>
<td>7.2%</td>
<td>10.4%</td>
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<tr>
<td>6 to 11-year-olds</td>
<td>11.3%</td>
<td>15.3%</td>
</tr>
<tr>
<td>12 to 19-year-olds</td>
<td>10.5%</td>
<td>15.5%</td>
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</tbody>
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Source: Journal of the Medical Association
Male and female obesity levels in selected European countries

**Figure 1.1.** Obesity prevalence (BMI > 30 kg/m²) in women 25-69 years from Pacific and Indian Ocean populations
Cultural Groups

Cultural Competency In the United States

- 35 million African Americans (13%)
  - Younger
    - 33% less than 18 vs. 24%
  - Low socioeconomic status
    - 26% vs. 8%
  - Single women heading households
    - 45% vs. 13%
Cultural Competency In the United States

- 35 million African Americans (13%)
  - Poverty rate of children
    - 37% vs. 11%
  - Obesity rates have approximately doubled in last two decades
  - Particularly alarming is the increase AA girls (children and adolescents) to as high as 17.7% (13.1%)

Cultural Competency in the United States

- Hispanic population
  - 31 million
  - Diverse
    - 65% Mexican, 14.3% Central or South American, 9.6% Puerto Rican
  - Young
    - 36% younger than 18, (24%)
Cultural Competency in the United States

- Hispanic population
  - Impoverished
    - 26% live in poverty
  - Impoverished Children
    - 33% Hispanic children live in poverty, (11%)
  - Rate of obesity has doubled in some subgroups
  - Particularly high in preschool population
    11.9% (7.0%), and school age 18.8% (13.1%)

Cultural Competency in the United States

- Cultural background predictive
  - HANES
    - Puerto Rican Hispanics most likely to be obese
  - ADD Health
    - Central/South American Hispanics less likely to be obese
    - First generation less likely to be obese than second generation
Cultural Competency in the United States

➢ Native Americans
  • 1.9 million
  • Diverse
    • More than 500 federally recognized tribes
    • Heritage, traditions, cultures differ
  • Young
    • 39% younger than 20

Cultural Competency in the United States

➢ Native Americans
  • 33% live on reservations
  • Impoverished
    • 50% live in poverty
    • Roughly one third overall live in poverty
  • Overweight status 2X as likely, obese 3x as likely as in white population as early as 2-4 years old
Cultural Competency in the United States

- Asians and Pacific Islanders
  - 4% of total US population
  - Most in western US, almost exclusively in urban regions
  - Young
    - 29% less than 18 (24%)

Cultural Competency in the United States

- Asians and Pacific Islanders
  - Slightly more likely to live in poverty (13% vs. 8%)
  - Also more likely to have family incomes > $75,000
  - Extremely diverse group in US
  - Marshall Islands
    - 50% Men over 18 overweight or obese (29%, 21%)
    - 60% Women over 18 overweight or obese (29%, 31%)
Cultural Competency in the United States

- Limited data
- 1997 10% Asian or Pacific Island Children in US were considered overweight (7%)
- Add Health
  - Chinese and Filipino youth significantly lower risk of obesity (15.3%, 18.5%, and 24.2%)
  - Koreans, Japanese, Southeast Asian, and Native American quite high 28.2%
  - First generation 26%, second and third 30-35%
What Does This Mean in the Management of Obesity?

- There is considerable cultural influence in the development of overweight status and obesity
- We are just beginning to develop data sets essential in risk stratification and fine tuning of intervention
- Areas of influence key when developing treatment plan, educational protocol

Contributing Factors
Contributing Factors

- Areas of Influence
  - Adaptive Mechanisms
  - Socioeconomic Status
  - Race
  - Physical Activity
  - Dietary Patterns
  - Maternal factors / Home Environment

Adaptive Mechanisms

- Thrifty gene theory
  - Harsh famine conditions have, through genetic selection, predisposed certain populations to highly efficient metabolisms and low metabolic rates

- Thrifty phenotype theory
  - In utero and early childhood exposure to poor nutrition leads to adaptation

- Diabetes, Type 2 and Gestational
Socioeconomic Status

- Numerous studies portraying an inverse relationship between family income and obesity
- Particularly powerful in female adolescents
  - *White, AA, Hispanic*
- Little data in Asian and Pacific Island populations
  - *American Chinese without correlation between obesity and income, however comparative cohort living in Singapore with significant correlation*

Race

- Even after controlling for SES
  - African american youth with significantly higher mean BMI than age matched whites
- CATCH study
  - 5000 students at 9yrs of age
  - Black race strong predictor of overweight status by 11 yrs
- Lower metabolic rates vs. cultural influences?
Physical Activity

- Increased BMI associated in most studies with inactivity
- Particularly television and computer game use in children
- May decrease metabolic rates as well as influence food choices

Physical Activity

- African-American girls engage in less physical activity than do African-American boys
- Hispanic prepubertal children obesity in girls was associated with less frequent moderate to vigorous activity, but in boys was associated only with less frequent low to moderate activity
- Little data on physical activity in patterns of Asian and Pacific Island children
  - ADD Health Study – Asian female adolescents reported low levels of moderate to vigorous exercise compared with white counterparts, however, also reported engaging in less inactivity (i.e. television, computer games, etc…)
Physical Activity

- Native american children (Pima indians) living in Arizona, spent more time watching television, less moderate to vigorous activity, less sports involvement
- Cultural differences usually not seen in children younger than 3-4 yrs
Dietary Patterns

- African American girls have higher intake of calories, dietary fat, saturated fat after controlling for SES factors
- African American girls also more likely to eat while watching television, or while doing homework
- Hispanic children with higher percentage body fat, higher dietary fat intake, lower than recommended fruit and vegetable intake
- Higher fruit juice and snack consumption in elementary aged Puerto Rican children

Dietary Patterns

- Native American children consume larger than average amounts of butter, lard, whole milk, fried bread, fried meats and vegetables, beans prepared with fat, and sugar filled beverages
- Navajo adolescents consume twice the national average of sugared carbonated beverages
- Recent proliferation of “fast food” and “convenience” chains on or near reservations increases access to high fat, high sugar foods
- Poverty also limits access to healthful alternatives
Dietary Patterns

- Limited data on the Pacific Island populations
- Study of dietary practices of the Marshall Islands revealed extensive use of:
  - High fat animal by products
  - Saturated fats
  - Lack of fruits and vegetables

Maternal Factors and Home Environment

- Breast feeding
- Juice consumption
- National Longitudinal Study of Youth
  - Increased risk for obesity if low level of cognitive stimulation
  - Maternal Pre-pregnancy BMI strongly linked to risk of childhood obesity particularly in Hispanic children
Maternal Factors and Home Environment

- Maternal education level predicts food choice
- Maternal cultural perceptions
  - Mexican American mothers of obese children more often chose pictures of “chubby” babies as “ideal” vs. mothers of nonobese children
- Maternal gestational weight gain strongly predictive of subsequent adiposity
  - Adolescent pregnancy twice as high in African American females 15-19
So, What Do We Do With This Information?

All Culture’s Concerns

➢ Individually
  • Maintain dignity
  • Maintain Autonomy
  • Have their beliefs respected
Practicing Cultural Humility

- E – Explain
- T – Treat
- H – Heal
- N – Negotiate
- I – Intervene
- C – Collaborate

Improving Communication

- L – Listen
- E – Explain
- A – Acknowledge
- R – Recommend
- N – Negotiate
What Do We Do With This Information?

- Obesity Interventions
  - Must recognize the importance of cultural and language factors
  - Take into account traditional meals, food sources, family structure, eating routine, finances
  - Focus on healthy eating and physical activity
  - Divert focus from dieting and weight loss
  - Parental involvement in children’s programs crucial

What Do We Do With This Information?

- Obesity Interventions
  - Can be delivered through families, schools, communities, health care settings
  - Must stress central role of the family
  - Often school, work and/or family based most effective
What has worked?

- McMurray studied 2000 children and adolescents aged 10 to 16, 25% African-American
  - Participation in one high intensity physical activity 3 to 5 days per week
  - Significantly decreased (ethnic and SES adjusted) risk for being overweight


What has worked?

- Figueroa et al. assembled a pediatrician, psychologist, dietician, and exercise instructor; developed a 10 week intervention focused on dietary modification and exercise
  - 59 Obese children, mean age 13
  - 50% African American
  - Significant decrease in total body fat mass
  - Without loss of lean tissue

What has worked?

- Stolley et al., 12 weekly one hour sessions in low income, inner-city, African American families
  - Low fat diet
  - Increasing physical activity
  - Significant reduction in calories consumed from fat


What has worked?

- Wadden et al., female African American adolescents
  - The greater the number of sessions attended by the mother, the greater the weight loss by the daughter

What has worked?

- Holcomb et al., “Jump Into Action”
  - Multidisciplinary approach to education and prevention specifically to decrease incidence of Type 2 Diabetes in the Hispanic population of a Texas school district
  - Increased knowledge and dietary awareness in fifth grade students


What has worked?

- Trevino et al., The Bienestar Health Program
  - Targeted fourth graders
  - Goals: Decreasing overweight and dietary fat intake
  - Intervened in the home, classroom, school cafeteria, and after-school care
  - Participants decreased fat intake, increased servings of fruits, vegetables

What is planned?

- Caballero et al., Pathways Study
  - School based primary prevention obesity project
  - Children in seven Native American nations and tribes on reservations in the southwest and Northern Plains
  - Modifications to food service, classroom curriculum, physical education, and family involvement


Summary

- Defined cultural competency
- Obesity is rising to epidemic proportions
- Development of pathological obesity is multifactorial
- Intervention is absolutely crucial to curb alarming trends
- Interventions must be culturally appropriate and engage the family in a central role in changing behavior
- Much more research is needed to ideally develop the most effective strategy for each distinct culture
References