Cultural Hair Practices and Physical Inactivity Among Urban African American Adolescent girls in the United States

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Background - Hair

• Pre-Slavery
  – Cultural trait
  – Braids
  – Identification
    • Age
    • Tribe
  – Social status

• Slavery
  – Adaptation of European hair styles

• Post Emancipation
  – Fitting in
    • Straightening

• Civil Rights
  – Reclaiming identity
  – Afro

• Current Day
  – Weaves
  – Braids
  – Straight
  – Natural
Background - Hair

- Biological Differences
  - Shape
    - Elliptical
    - Flat
  - Moisture
    - Uneven distribution
    - Fragile ends
    - Requires oil product
Background – Physical Activity

• Recommendation:
  – Children 6-19 y/o 60 min of physical activity daily
  – Includes physical education

• Reality:
  – 2013 27% of high school students met daily recommendations
  – 2013 29% of high school students participated in Phys. Ed class daily

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physically active at least 60 minutes/day</td>
<td>17.7%</td>
<td>36.6%</td>
</tr>
<tr>
<td>Attended physical education classes daily</td>
<td>24.0%</td>
<td>34.9%</td>
</tr>
</tbody>
</table>

CDC Physical Activity Facts http://www.cdc.gov/healthyschools/physicalactivity/facts.htm

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Background – Physical Activity

African American Females
- Highest rates of inactivity
- Barriers
  - Aesthetic
    - Hair maintenance
  - Structural
    - Neighbor hood lighting
    - Crime
    - Lack of safe walkable space
  - Financial
    - Gym memberships
    - Equipment

Solutions
- Schools
  - Provide safe space
  - Gymnasiums
  - Physical education classes
- Challenges
  - Poor attendance
  - Lack of full participation
  - Time constraints
Background - Physical Activity

• Benefits
  – Improved academics
  – Improved concentration
  – Decreased mood disorders
  – Decrease risk of overweight/obesity related diseases
  – Increased sense of well-being

CDC Physical Activity Facts http://www.cdc.gov/healthyschools/physicalactivity/facts.htm
Background - Obesity

- In the U. S. overall decline in childhood obesity
- Disparity remains
  - All 16.9%
  - Cauc. 14.3%
  - Black 20.2%
  - Latino 22.4%
Purpose

• Determine the relationship between urban African American girls’ cultural hair practices and physical activity participation

• $Ho_1$
  – Urban African American girls who spent more money on their hair practice will have decreased participation in physical activity in and out of school.
Methods – Sample

- Convenience
  - High School Newark, New Jersey
- African American girls 9th – 12th grade
- At or below poverty level

<table>
<thead>
<tr>
<th></th>
<th>n=50</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>17</td>
<td>14</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>11th</td>
<td>9th</td>
<td>12th</td>
<td></td>
</tr>
<tr>
<td>BMI</td>
<td>28.25</td>
<td>16</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

Underweight Less than 18
Normal weight 18 – 25.9
Overweight 26 – 29.9
Obese Greater than 30
Methods

• Human Subjects
  – Rutgers University IRB approval
  – Letter of support from high school principal and administrators
• Information flyers distributed at lunch, before/after school
• Flyers hung in girls restrooms, cafeteria, hallways
• Announcements: morning, phys ed. Class
• Parental consent & assent <18 y/o
• Consent >/= 18 y/o
• BMI measured Ht, Wt, DOB, gender, CDC BMI calculator
• Survey - Cultural Hair Assessment Inventory (CHAI)
• $10.00 Dunkin’ Donut card for participation
Find Your Hair Type

Type 1: Straight
Type 2: Wavy-Curly
Type 3: Curly-Kinky
Type 4: Kinky-Coily

- I like my natural hair the way it is? Yes □ No □
- Have you done something to make your natural hair different? Yes □ No □
- If you answered yes, how have you changed it? □ Straight perm □ Curly perm □ Brazilian blow-out □ Weave □ Extensions
- Do you cover your hair? Yes □ No □
- If you answered yes, how do you cover your hair? □ Wig □ Hijab □ scarf/cloth wrap
- Is your hair braided today? Yes □ No □
- Are you wearing locs today? Yes □ No □
- Are you wearing an Afro today? Yes □ No □
## Results

<table>
<thead>
<tr>
<th>Hair Prep</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of hair service</td>
<td>$38.66</td>
<td>$0.00/Free</td>
<td>$130.00</td>
</tr>
<tr>
<td>Time spent on hair</td>
<td>1hr 48 min</td>
<td>10 min</td>
<td>4hr</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exercise Outside of School</th>
<th>Pearson Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td></td>
</tr>
<tr>
<td>Normal weight</td>
<td>.277</td>
</tr>
<tr>
<td>Overwt/Obese</td>
<td>.000*</td>
</tr>
<tr>
<td>Cost of hair service</td>
<td>.847</td>
</tr>
<tr>
<td>Time spent on hair</td>
<td>.084</td>
</tr>
<tr>
<td>Hair Type</td>
<td>.264</td>
</tr>
</tbody>
</table>

Statistic: Crosstabs Phi Cramer’s V

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# Results

<table>
<thead>
<tr>
<th>Do you sweat when you participate in gym class?</th>
<th>BMI</th>
<th>Normal Weight</th>
<th>.538</th>
<th>Over weight/Obese</th>
<th>.592</th>
<th>Cost of hair services</th>
<th>.592</th>
</tr>
</thead>
</table>

**Time spent on hair** | .015*  
Hair type | .373  

<table>
<thead>
<tr>
<th>BMI - Over weight/ Obese</th>
<th>Hair Type</th>
<th>.661</th>
<th>Time spent on hair</th>
<th>.005*</th>
<th>Cost of hair service</th>
<th>.179</th>
<th>Time of class</th>
<th>.003*</th>
</tr>
</thead>
</table>

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# Results

<table>
<thead>
<tr>
<th></th>
<th>Hair Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Straight</td>
</tr>
<tr>
<td>Nml weight</td>
<td>1</td>
</tr>
<tr>
<td>Overweight</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
</tr>
</tbody>
</table>
Conclusion

• Hair style had no bearing on decision to participate in activity in or outside of school.
• Cost of hair service had no bearing on decision to participate in activity in or outside of school.
• Hair type was relevant when deciding to participate in activity in or outside of school.
• Time to prepare hair was relevant when deciding to participate in activity in or outside of school.
• There was a significant relationship between overweight and obesity and: participating in activity, hair type, time to prepare hair and time of phys ed. class.
Conclusion

- Overweight and Obese girls tend to have more difficult to manage hair.

Practice Implications

- NPs should recognize that cultural hair practices are important to African American adolescents/women
- Understand and appreciate the biological differences in hair, hair hygiene and hair practices
- Engage minority adolescents/women in culturally relevant discussion regarding hair, hair type, hair practices as it pertains to decision to exercise.
Limitations

• Small sample size; unable to generalize
• Homogenous sample; all African American
• New instrument- needs rigorous validation
Next Steps

• Repeat study with larger sample size
• Rigorous validation of the CHAI with Latino and Caucasian girls
• Analyze qualitative data
• Engage target audience/key stakeholders with the goal of developing culturally sensitive and relevant physical activity routines for adolescents and women of color.
References

CDC Physical Activity Facts [http://www.cdc.gov/healthyschools/physicalactivity/facts.htm](http://www.cdc.gov/healthyschools/physicalactivity/facts.htm)
Jehri curl, conks, dreadlocks and afro [http://www.jazma.com/black-hair-history](http://www.jazma.com/black-hair-history)
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