Reclaiming & Nurturing the Health of our Youth

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Why this Research Interest?

- Obesity - A worldwide epidemic (WHO, 2011)
- Predisposes to Type 2 DM, CVD, HTN, CVA, and CA's
- All lifestyle diseases – All preventable
- African Americans – Higher incidence of Type 2 DM
- Alabama - 2nd most obese state in nation (CDC, 2011)
- 30% of children & young adults overweight - obese (CDC, 2011)

- Minority obesity rates: Blacks 49.5%; Hispanics 39% (JAMA, 2012)

- Compared to Caucasians 34% (JAMA, 2012)

- 36% of adults obese - Projected 42% by 2030 (Finkelstein, et al., 2012)

- Oakwood University & Southern University students combined - 30% overweight to obese (Pawlack & Sovyanhadi, 2009)

- Same as national average for children & young adults
Health & Wellness Study I

Garvey et al, 2011:

Landmark Quantitative Study
Funded
Methodology

Three assessments conducted to determine prevalence of overweight & obesity among Black college students:

- Body Mass Index (BMI)
- Body Fat Percentage (BF%)
- Waist to Hip Ratio (WHR)
Participant Criteria

N = 265 students

≥ 19 years

≥ 2nd semester Freshman – Senior year

Incentives: Audited drawing for 1 iPad, 1 Flash drive, 1 Walmart card
Instruments

Skin Fold Caliper
Digital Scale
Meter Ruler
BMI Calculator
Tape Measure
Emphasis on BF%:
(Most accurate to determine lean to fat ratio)

200 lb person with 40% body fat = 80 lbs of fat
VS
200 lb person with 10% body fat = 20 lbs of fat

Each weighs 200 lbs
BUT
Different health risks!
### General Body Fat Percentage Categories

*American Council on Exercise*

<table>
<thead>
<tr>
<th>Classification</th>
<th>Women (% fat)</th>
<th>Men (% fat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Fat</td>
<td>10-12%</td>
<td>2-4%</td>
</tr>
<tr>
<td>Athletes</td>
<td>14-20%</td>
<td>6-13%</td>
</tr>
<tr>
<td>Fitness</td>
<td>21-24%</td>
<td>14-17%</td>
</tr>
<tr>
<td>Acceptable</td>
<td>25-31%</td>
<td>18-25%</td>
</tr>
<tr>
<td>Obese</td>
<td>32% plus</td>
<td>25% plus</td>
</tr>
</tbody>
</table>
Data Analysis

Statistical Package for the Social Sciences (SPSS)
Results:
What do Oakwood students look like?
Demographics

- Age range of 19 to 26 yrs (Average 21 yrs)
- 128 Males (48.3%)
- 137 Females (51.7%)
- Class Standings: FR: 19.6%
  SO: 27.2%
  JR: 30.6%
  SR: 22.6%
BMI Ranges

- Normal (<25) = 56.6%
- Overweight (25-30) = 26.8%
- Obese (30-40) = 12.8%
- Severely Obese (>40) = 3.8%

- Healthy: 56.6%
- High Risk: 43.4%
Comparison to Previous Study

- Pawlak and Sovyanhadi (2009)
- 31% with BMI of overweight to obese
- (21% overweight and 10% obese)
- African American students 35.8% overweight to obese
- Caucasian students 18.9% overweight to obese
WHR
(Predictive of Risk for Cardiovascular Disease)

Low Risk: 80.8%
Moderate Risk: 9.1%
High Risk: 10.2%

(Insignificant finding – may be due to age of this population sample)
Full Study Published 2013 in Peer Reviewed Journal

“The prevalence of obesity among students at an African American university in the south”

http://jsumurc.org/ojs
How can we reclaim and nurture the health of our youth?
Follow-up Study: Health & Wellness II

Garvey et al, 2012:
Mixed Method Study
Funded
Methodology

OMRON Body Fat Analyzer
(Model HBF-36)
40 Item Questionnaire
(Based on Eight Laws of Health)

- Demographics
- Nutrition
- Exercise
- Water
- Sunlight
- Temperance
- Air
- Rest
- Trust in God
Participant Criteria

N = 36 students

≥19 years

≥ 2nd semester Freshman – Senior year

BMI >25 only

BF% = Overweight to Obese only

Incentives: Audited drawing for 1 iPad, 1 Flash drive, 1 Walmart card
Data Analysis

Quantitative: SPSS

Qualitative: Manual coding of common themes
Demographics

- 16 Males
- 20 Females
- Class Standings: 14 FR; 7 SO; 11 JR; 3 SR
- 60% - Immediate family members overweight
- 90% SDA’s
- Ethnicity: 90% Black; 10% Hispanic
“IT'S WHEAT-FREE, DAIRY-FREE, FAT-FREE, NUT-FREE, SUGAR-FREE AND SALT-FREE...ENJOY!”
Common Themes

- 80% non-vegetarian
- 90% eat in Cafeteria &/or Student’s Market
- “I eat when I feel hungry”
- “I eat when I am bored”
- “I am a Stress Eater”
"I'm really serious about exercising. Last year I only went to the gym twice, once to join and once to renew."
50%
Do no form of exercise

(Reduces stress levels)
NOW REMEMBER, YOU HAVE ENOUGH WATER FOR HALF AN HOUR, THEN YOU’LL HAVE TO COME DOWN.
90% drink 1-2 glasses per day

(6-8 glasses per day is recommended)
Sunlight
Most participants got 30 or more minutes per day

(≥30 mins. are recommended)
Temperance

J.B. Figly
Died of Moderation

© Original Artist
“Not enough balance between school & social activities”
“I feel overwhelmed”
Several stress factors:
“Relationships”
“School work”
“Procrastination”
“Finances”
Air

[Cartoon: Two fish in a glass half full of air. One fish says, "Whoa! Half empty! Definitely half empty!! Choke! Gasp!" The other fish says, "Just listen to you! Always the pessimist!"]
50% spend 30 minutes or less outdoors
Rest

I just needed to get away for a while and recharge my batteries.
 “Not enough hours of sleep at nights”

 “Long study hours”
Trust in God

"You've all been whining a lot lately, so this week's sermon is from 'The Book of Lamentations'...."
- 90% have daily personal prayer
- 40% have daily personal devotion

(Reduces anxiety and stress levels)
Discussion

- Multi-faceted & culturally relevant interventions needed
- Curricular education: Revision of Gen Eds- (Freshman Seminar, Health Principles, Nutrition courses)
- Ongoing health awareness campaigns (campus & community health fairs)
Discussion

- Immediate family education needed
- Co-curricular activity and active transportation (Encourage intra-mural sports, more biking vs. driving)
- Institutional policy changes
Discussion

- Many students are living on their own for first time
- Early intervention programs essential when students arrive as freshmen
- Basics of NEWSTART to be constantly repeated during college experience to prepare students for healthy adult life
- Emphasize and encourage practice
Discussion

- Cafeteria and student’s market to support health initiatives
- Provide wide variety of live, raw fruits & vegetables, nuts, legumes, whole grains, and reduction in sugary drinks
- Physical activity-related behavior is complex
- Influencing factors - Access to recreation centers, time availability, gender, and motivation to exercise
Follow-Up Study: Health & Wellness III (Garvey et al, 2013)
Qualitative; Interventions; Evaluate Policy

- Eat- Pray- Move (Funded & In Progress)
- Deeper qualitative investigation to inform development of age appropriate intervention
- Develop computer interactive “App”
- Explore faith factor and obesity
- Explore Partnership with LLU Adventist Health Study 2
- Evaluate Health Ministries Policies: NAD down
References

- American College Health Association National College Health Assessment. (2008, Fall N/A).
• (Josselson, R. Book chapter: The embedded self: I and thou revisited), 91.