Successful weight loss: A positive deviance study of low-income African American women

Elaine Banerjee MD, MPH
Lehigh Valley Health Network, Elaine_S.Banerjee@lvhn.org

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Elaine Seaton Banerjee
MD, MPH
Conflict of interest

- My husband works for a pharmaceutical packaging company.
- No pharmaceutical products will be discussed during this presentation.
Background: Population

- High risk of obesity:
  - African Americans
  - Women
  - Low-Income

Ogden, Carroll, Kit, & Flegal, 2014; Ogden, Lamb, Carroll, & Flegal, 2010; Kumanyaka 1991; Wing 1996; Parikh 2006; Anderson 2007
Background: Positive Deviance

- Positive deviants deviate from the norm in a good way

- NWCR is one example of this type of approach in weight loss

Marsh, Schroder, Dearden, Sternin, & Sternin, 2004; Klem, Wing, McGuire, Seagle, & Hill, 1997

Objective

- To evaluate the experiences low-income African American women who successfully lost weight, following a positive deviance approach, to qualitatively explore consistent themes that may promote weight loss.
Setting & Participants

- **Setting**: Urban, academic, family practice office
- **Participants**: 71 Low-income, AAW, 18-64 years old, ever had obesity
  - 35 Positive deviants intentionally lost >10% of their max weight & maintained for >6 months
  - 20 Positive deviants participated in interviews
Qualitative outcomes: Interview questions

- When you successfully lost weight, what motivated you to make the effort?
- What do you think made your weight loss effort successful?
- What were the biggest barriers to weight loss for you?
- How did you overcome these barriers?
- Is there anything else you want to share with us?
Results: Positive Deviants

- Average Age 45 years
- Average weight loss 41.9 lbs (18% max weight)
- Average weight maintained 33.9 lbs (15% max weight)
- Average household income $24,848/year 122% of the poverty level
Results: Qualitative
Major themes

- Epiphany
- Opportunity
- Flexibility & Creativity
Results: Qualitative
Theme 1: Epiphany

- “Do it for me”
- Health
- Appearance
- Quality of Life
- Family
Results: Qualitative

Theme 1: Epiphany – “Do it for me”

“But I said you know what I have to do what I can do for me, I can’t live for other people anymore.”

“I had to lose the weight, for me, couldn’t do it for nobody else, I had to do it for me.”
Results: Qualitative
Theme 1: Epiphany – Health

“It was finding out that I had the diabetes... I was like you gotta be kidding, but when she gave me the kit and everything, then I knew it was the truth.”
Results: Qualitative
Theme 1: Epiphany – Appearance

“Yeah, I took a look at myself, I really did look. I told you I walked by that window, and I went, ‘Oh my God, look at you girl, you big.’”
Results: Qualitative
Theme 1: Epiphany – Quality of Life

“I like being able to tie my shoes, I like being able to run up and down a couple of steps.”

“My legs, my legs used to rub when I used to walk. I didn’t like that.”
Results: Qualitative
Theme 1: Epiphany – Family

“And I can’t tell [my children] to eat healthy and then I’m not doing it. So I just wanted to do it, just try to, try to eat healthier.”
Results: Qualitative
Theme 2: Opportunity

- Support
- Time
Results: Qualitative
Theme 2: Opportunity - support

’Cause I got a 14-year-old … he’ll watch [my younger children] while they playing … He told me to keep walking, so that’s what I kept doing… Yeah, he just kept pushing me, and pushing me to do it, so, I, I didn’t think I was gonna keep going. So he kept, ‘Come on, mom.’”
“My husband died... And, having time on my hands, what was I gonna do? Stay home, and get fat!? So I went out, to the Y... Well having a husband meant that I did dinner every day. I did breakfast every day. I did that time for him...and I left me out. So now, it's all about me.”
Results: Qualitative
Theme 3: Flexibility & Creativity

- Self-learning
- Tricks
Results: Qualitative
Theme 3: Flexibility – self-learning

“And I saw like ideas step-by-step and then I see which worked, and I get used to it, and then I move on to something else...”
“This is my sugar water. I call it, I tell everybody there sugar in it, but it’s not, it’s just water.”

“I would kind of like treat myself as I was a diabetic, but I wasn’t.”

“If something has more than 10 ingredients it goes back on the shelf, back in the freezer, it doesn’t even make it to the cart.”
Discussion: Strengths

- Positive deviance approach
  - Solutions are accessible to population
Discussion: Limitations

- Positive deviance approach
  - Limited generalizability
Discussion: Future directions

- Qualitative evaluation with controls
- Developing and quantitatively testing hypotheses
- Developing interventions
Discussion: Conclusion

Positive deviants exist and are beating the odds

They have valuable lessons to teach us about weight loss
References


Thank you

- The participants of this study

- The study team: Marianna LaNoue, PhD; Sharon Herring, MD, MPH; Katelyn Hurley, MPH; Katherine Puskarz, MPH; Kyle Yebernetsky, MD; & Neil Shah

- Thomas Jefferson University Department of Family and Community Medicine provided space & participant compensation

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Questions?

Contact Information:
Elaine Banerjee
Physician Researcher
Elaine_S.Banerjee@lvhn.org
## Results: survey Demographics

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<th>Case (N=35)</th>
<th>Control (N=36)</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex - Female</strong></td>
<td>35 (100%)</td>
<td>36 (100%)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>44.9 (10.4)</td>
<td>43.0 (11.6)</td>
<td>0.475</td>
</tr>
<tr>
<td><strong>Race – African American</strong></td>
<td>35 (100%)</td>
<td>34 (94%)</td>
<td>0.314</td>
</tr>
<tr>
<td><strong>Ethnicity – Non-Hispanic</strong></td>
<td>35 (100%)</td>
<td>36 (100%)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Maximum Weight</strong></td>
<td>219.0 (43.9)</td>
<td>217.1 (48.7)</td>
<td>0.647</td>
</tr>
<tr>
<td><strong>Marital Status – Married or Living with Partner</strong></td>
<td>11 (31%)</td>
<td>5 (15%)</td>
<td>0.100</td>
</tr>
<tr>
<td><strong>Education – Did not complete High School</strong></td>
<td>12 (34%)</td>
<td>3 (8%)</td>
<td>0.007</td>
</tr>
<tr>
<td><strong>Employment – Currently Employed</strong></td>
<td>12 (34%)</td>
<td>24 (67%)</td>
<td>0.006</td>
</tr>
<tr>
<td><strong>Housing Type – Own Home</strong></td>
<td>7 (20%)</td>
<td>7 (19%)</td>
<td>0.953</td>
</tr>
<tr>
<td><strong>Length of Time at Current Residence (y)</strong></td>
<td>8.8 (8.4)</td>
<td>9.2 (11.1)</td>
<td>0.872</td>
</tr>
<tr>
<td><strong>Number of People</strong></td>
<td>3.3 (1.5)</td>
<td>4.2 (2.9)</td>
<td>0.113</td>
</tr>
<tr>
<td><strong>Household Income</strong></td>
<td>$24,848 ($27,406)</td>
<td>$26,613 ($28,394)</td>
<td>0.824</td>
</tr>
<tr>
<td><strong>% Federal Poverty Level</strong></td>
<td>122% (123%)</td>
<td>110% (92%)</td>
<td>0.706</td>
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</table>
## Results: survey Outcomes

<table>
<thead>
<tr>
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<th>Case (N=35)</th>
<th>Control (N=36)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>N (%)</td>
<td>N (%)</td>
<td></td>
</tr>
<tr>
<td><strong>Always get support</strong></td>
<td>14 (40%)</td>
<td>9 (25%)</td>
<td>0.203</td>
</tr>
<tr>
<td><strong>Food Insecure</strong></td>
<td>15 (43%)</td>
<td>15 (42%)</td>
<td>0.341</td>
</tr>
<tr>
<td><strong>All Meals prepared at home</strong></td>
<td>21 (60%)</td>
<td>13 (36%)</td>
<td>0.044</td>
</tr>
<tr>
<td><strong>Are you the person who prepares most meals</strong></td>
<td>28 (80%)</td>
<td>35 (97%)</td>
<td>0.069</td>
</tr>
<tr>
<td><strong>Adequate nutritional Literacy</strong></td>
<td>33 (94%)</td>
<td>35 (97%)</td>
<td>0.539</td>
</tr>
<tr>
<td><strong>Currently making any diet changes</strong></td>
<td>30 (86%)</td>
<td>22 (61%)</td>
<td>0.019</td>
</tr>
</tbody>
</table>
Discussion: Comparison with NWCR

- Many more of our participants “just decided to do it”
- Similarly the most common trigger was a medical trigger
- Opportunity via support and time were not factors in the NWCR sample or were not addressed
- Our participants were much less likely to use a formal program and displayed greater creativity and flexibility