Evaluation of provider-led, healthy weight program for lesbian and bisexual women over 40 in the San Francisco Bay Area

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The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the U.S. Department of Health and Human Services' Office on Women's Health.

Presenter Disclosures
Natalie Ingraham

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:
No relationships to disclose

Presentation Overview
- Give overview of WHAM
- Discuss WHAM intervention program
  - Program components: mindfulness, nutrition & physical activity
  - Outcomes of interest
  - Recruitment
- Review early data analysis
- Discuss future directions
Why is this important?

- Adult sexual minority women (SMW) may face challenges in improving their health.
- SMW are more likely to be obese compared to heterosexual women.
- As a result, SMW may be at increased risk for chronic disease though current research does not show increased risk (Eliason, Ingraham, et al., under review).

WHAM: Research Questions & Aims

- Is the WHAM program for LB women over 40 feasible?
- What is the impact of the WHAM program on a series of health outcomes?
  - Increased glycemic control (measured by hemoglobin A1C) and reduced cholesterol.
  - Improved nutrition: increase in adherence to Dietary Guidelines for Americans, 2010.
  - Increased energy expenditure: increase in moderate-intensity physical activity per week.

WHAM Program

- WHAM (Women’s Health and Mindfulness)
  - provider intervention
  - group-based intervention for LB women of size ≥ age 40
- Guided by formative research as CBPR project
  - 7 focus groups with 28 LB overweight/obese women over 40
- 12 week health program led by clinic-based mental health professional (LCSW and/or Clinical Psychologist)
- Groups held at LMHS and in the East Bay from October 2013 – September 2014.
WHAM - Recruitment

WHAM - Methods

- Randomized, stepped-wedge design
- N=80 with completed baseline data
- Analyses presented here are intent-to-treat

WHAM: Feasibility

<table>
<thead>
<tr>
<th>Women in Attendance</th>
<th>Number of Sessions Attended</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
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<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Total Sessions Attended – Intervention Group (n=41)
WHAM Results – Baseline data

**Characteristics**
- **Overall**
  - Northern part of 40 years: 58 (42, 60-76)
  - Race/ethnicity:
    - Black: 9 (12%)
    - Latina: 21 (26%)
    - White: 45 (56%)
    - Asian: 1 (1%)
    - Multiracial/multiethnic/other: 9 (11%)
  - Educational attainment:
    - Less than 4-year college degree: 31 (39%)
    - 4-year college graduate: 21 (26%)
    - Post-graduate work: 28 (35%)
  - Household income (last year):
    - <10k: 10 (12%)
    - 10k - <30k: 34 (43%)
    - 30k - <50k: 7 (9%)
    - 50k - <90k: 16 (20%)
    - 90k+: 13 (16%)
  - Sexual orientation:
    - Lesbian: 60 (75%)
    - Bisexual: 10 (13%)
    - Other: 10 (13%)
  - Cis-gender: 67 (84%)
  - In committed relationship: 35 (44%)
  - Currently live with partner: 30 (86%)
  - Medical insurance (yes): 71 (89%)
  - Medical conditions/chronic:
    - Arthritis: 39 (49%)
    - Chronic Pain: 35 (44%)
    - Hypertension (high BP): 36 (45%)
    - Diabetes: 13 (16%)

**Health Behavior**
- **Overall**
  - Physical Activity (at least 1 day in last 7 days):
    - Moderate: 38 (48%)
    - Vigorous: 19 (24%)
  - Substance use:
    - Tobacco: 16 (20%)
    - Marijuana: 29 (36%)
    - Heavy alcohol (4+ drinks any day in the last 30 days): 6 (8%)
  - Nutrition (Servings per week):
    - Regular Soda (with sugar): 35
      - median (mean, min-max): 1 (0.5, 1.0-9.2)
    - Coffee or Tea (bo/w sugar): 35
      - median (mean, min-max): 5 (1, 5.0-9.2)
    - Water consumption (per day): 80
      - median (mean, min-max): 1 (0, 0-9.2)
    - Fruit: 78
      - median (mean, min-max): 5 (3.6, 0.9-9.2)
    - Green Vegetables: 76
      - median (mean, min-max): 3.4 (0.5, 0-9.2)
    - Other vegetables: 77
      - median (mean, min-max): 4 (0.5, 0-9.2)

**WHAM Results – Immediate vs. Delayed**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Study Arm</th>
<th>Median (Adj)</th>
<th>P-Value (Adj)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water (glasses/day)</td>
<td>Immediate</td>
<td>5</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>Delayed</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Walking (min/week)</td>
<td>Immediate</td>
<td>135</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>Delayed</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>Moderate or Vigorous</td>
<td>Immediate</td>
<td>77.5</td>
<td>0.34</td>
</tr>
<tr>
<td>Activity (min/week)</td>
<td>Delayed</td>
<td>60.0</td>
<td></td>
</tr>
</tbody>
</table>
WHAM Results - Immediate vs. Delayed

<table>
<thead>
<tr>
<th>Nutrition – Fruit/Vegetable Servings</th>
<th>Immediate</th>
<th>Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 servings per day</td>
<td>2.9%</td>
<td>8.3%</td>
</tr>
<tr>
<td>1-2 per day</td>
<td>38.2%</td>
<td>50%</td>
</tr>
<tr>
<td>3-4 per day</td>
<td>35.3%</td>
<td>25%</td>
</tr>
<tr>
<td>5 or more per day</td>
<td>23.5%</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

P-value = 0.48

WHAM Results - Immediate vs. Delayed

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Study Arm</th>
<th>Median</th>
<th>P-Value (Adj)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Health Quality of Life</td>
<td>Immediate</td>
<td>42.7</td>
<td>44.9</td>
</tr>
<tr>
<td>Mental Health Quality of Life</td>
<td>Immediate</td>
<td>47.5</td>
<td>44.0</td>
</tr>
<tr>
<td>Mindfulness (MAAS)</td>
<td>Immediate</td>
<td>4.0</td>
<td>3.7</td>
</tr>
<tr>
<td>Mindful Eating (emotional response)</td>
<td>Immediate</td>
<td>3.1</td>
<td>2.7</td>
</tr>
</tbody>
</table>

WHAM Results - Immediate vs. Delayed

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Range</th>
<th>Immediate</th>
<th>Delayed</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDL Cholesterol</td>
<td>Ideal/Normal (&lt;130)</td>
<td>57.1%</td>
<td>43.8%</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>Above Normal (130+)</td>
<td>42.8%</td>
<td>56.2%</td>
<td></td>
</tr>
<tr>
<td>HDL Cholesterol</td>
<td>Low (&lt;46)</td>
<td>20.7%</td>
<td>6.3%</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>Normal (46+)</td>
<td>79.3%</td>
<td>93.8%</td>
<td></td>
</tr>
<tr>
<td>Hemoglobin A1c</td>
<td>Normal (&lt;5.7)</td>
<td>44.8%</td>
<td>46.8%</td>
<td>0.96</td>
</tr>
<tr>
<td></td>
<td>Pre-diabetic (5.7-6.4)</td>
<td>37.9%</td>
<td>34.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diabetic (6.5+)</td>
<td>17.2%</td>
<td>18.8%</td>
<td></td>
</tr>
</tbody>
</table>
WHAM - Limitations
- Small sample size as a pilot program
- Self-reported behavioral data
- Low attendance/dose effect for certain groups
- WHAM faced typical intervention challenges in recruitment and retention for this target population.

WHAM - Implications
- WHAM was a feasible intervention program for the target population of LB women of size over 40.
  - Strategies to increase adherence needed.
- Early results suggest that WHAM is successful in helping women eat more mindfully and healthfully.
- WHAM also helped increase women’s activity and mobility levels.
- WHAM helped combat social isolation with aging among LGBT adults.

WHAM - Next Steps
- Comparison of levels of change between baseline & follow-up & between randomized groups
- Per-protocol analysis to examine dose-response for key outcomes.
- Seeking funding currently for full program implementation (n=200 participants) across 3 years
  - Adding sessions on menopause, cancer risks & glycemic control based on data and participant request
Presentation Summary

- Overview of WHAM
- Discuss WHAM intervention program
  - Recruitment
  - Program components: mindfulness, nutrition & physical activity
  - Outcomes of interest
- Early data analysis – exciting trends towards health!
- Future directions

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Thank You!

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