# Acceptance-Based Behavioral Treatment Improves Weight Losses among African-American Participants

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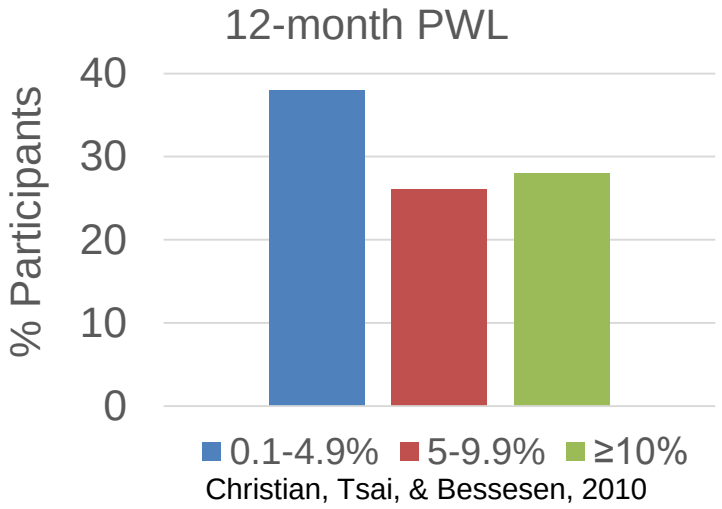
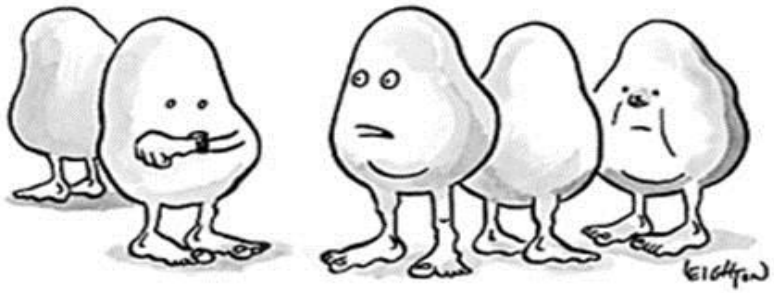
# The state of behavioral treatment for obesity

- Key limitations to standard behavioral treatment for obesity:
  - Half of individuals experience sub-optimal short-term weight losses
  - The majority of individuals do not maintain weight losses



Christian, Tsai, & Bessesen, 2010



"Ready to head back?"

# Addressing the challenge of lifestyle modification

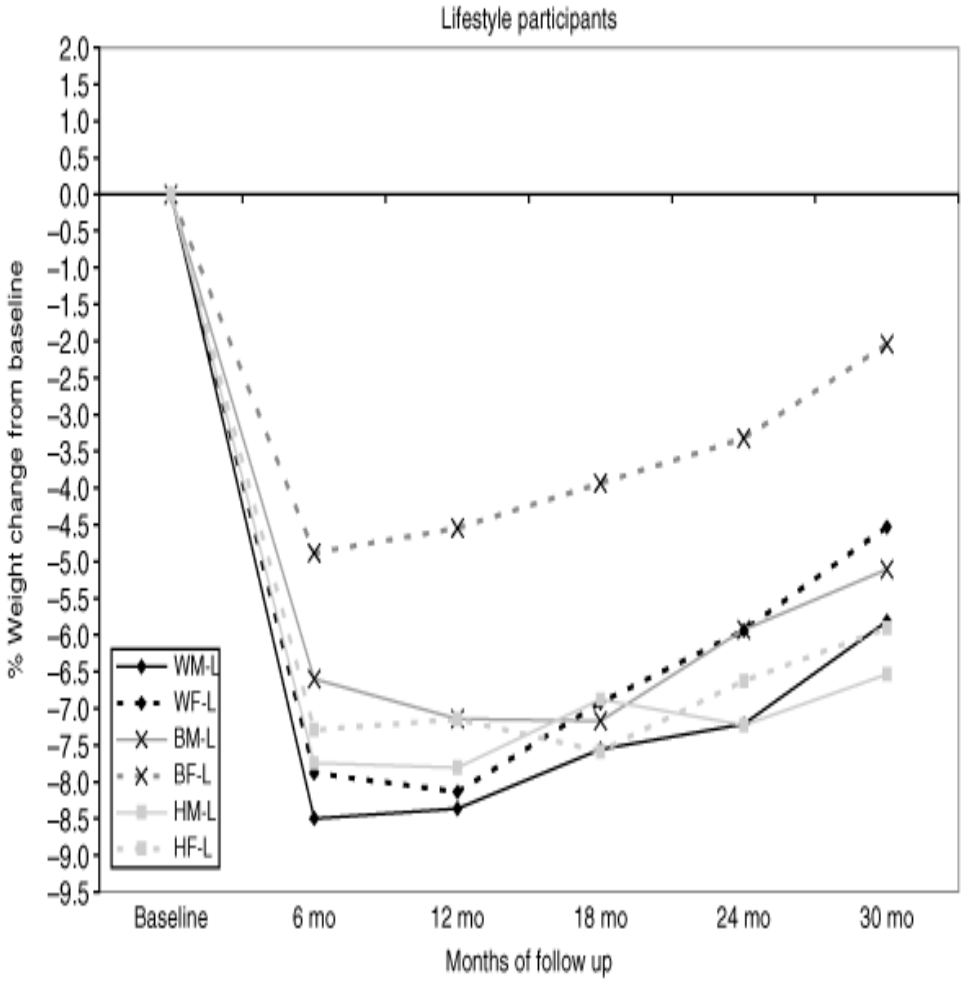
Assumption: Traditional behavioral skills are necessary but not sufficient

| Key self-regulation challenge | Treatment enhancement |
|---|---|
| Food-rich modern environment: Near-constant dietary restraint necessary for weight control | Engineer the **personal food environment** to reduce need for self-control (e.g., reduce availability of tempting foods; Gorin et al., 2013; Lowe, 2003) |
| Biological drives: Appetite for, liking/wanting of palatable foods | **Acceptance-based approaches**, which teach individuals to engage in value-driven behaviors despite challenging internal experiences (Forman & Butryn, 2015; Hayes, Strosahl, & Wilson, 2011) |

# Key questions

- Can we improve the efficacy of behavioral treatment for obesity by enhancing the package of skills taught?
- Can we address disparities in treatment outcome, i.e., improve outcomes for those for whom behavioral treatment is least effective?

Weight loss by race and sex in DPP



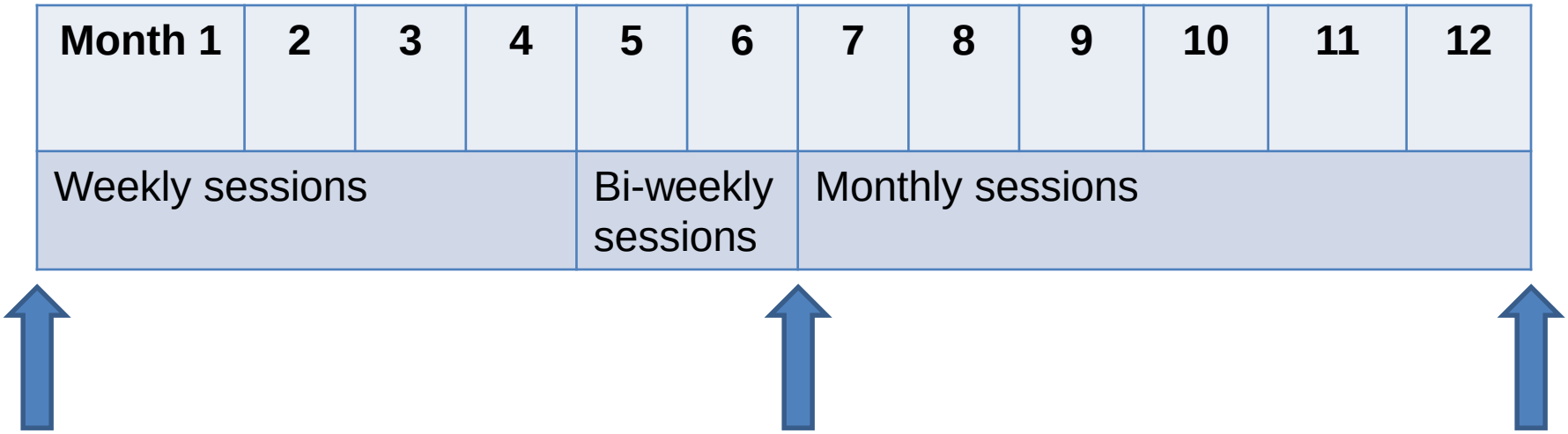

West, Prewitt, Bursac, & Felix, 2008

# Aims of the current study

- Compare the efficacy of three versions of behavioral treatment:
  - Traditional behavioral treatment **(BT)**
  - BT integrating environmental skills **(BT+E)**
  - BT integrating environmental *and* acceptance-based skills **(BT+EA)**
- Test moderators of treatment efficacy

# Study design

- Random assignment to BT, BT+E, or BT+EA
- 26 treatment sessions over 12 months
- Treatment provided in groups of 10-14 participants by master's- or doctoral-level clinicians



| | BT | BT+E | BT+EA |
|---|---|---|---|
| Core Skills | Calorie prescription based on balanced deficit diet<br>Physical activity prescription (gradually increase to 250 minutes/week of MVPA)<br>Self-monitoring<br>Goal setting<br>Problem solving<br>Developing social support<br>Preventing relapse | | |
| Enhancements | N/A | • Appreciate challenges of macro-environment<br>• Modify personal food environment (reduce availability of unhealthy foods, increase availability of healthy foods)<br>• Increasing cues for physical activity | • ⇦Environmental skills<br>• Clarity about how weight control goals are related to values<br>• Willingness to tolerate discomfort/perceived loss of pleasure in service of those values<br>• Mindful decision making, cognitive defusion |

# Participants

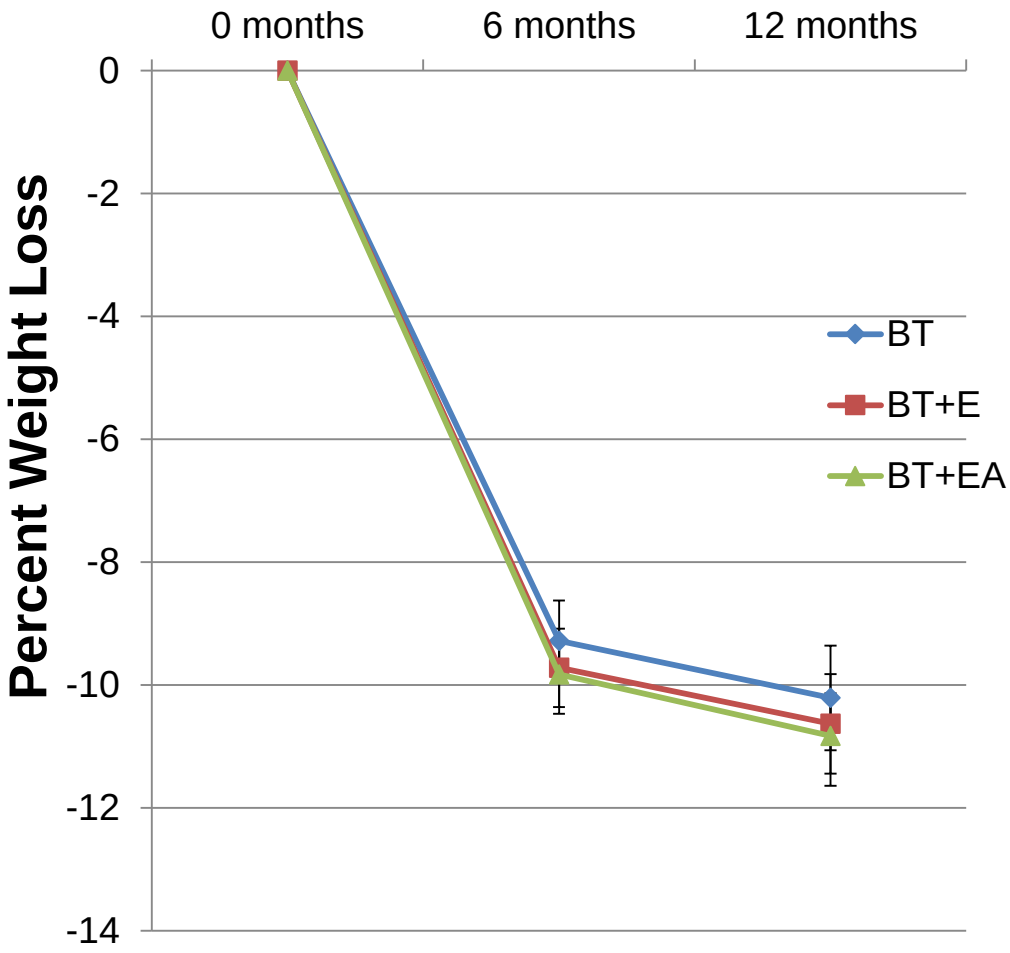
- Adults (n = 283) recruited from the community
- BMI between 27 and 45 kg/m$^2$

| Baseline characteristic | BT (n=88) | BT+E (n=93) | BT+EA (n=102) |
|---|---|---|---|
| Age, mean yrs (SD) | 53.02 (9.32) | 53.41 (10.28) | 53.23 (9.43) |
| BMI, mean kg/m$^2$ (SD) | 34.96 (5.19) | 35.38 (5.17) | 35.23 (4.64) |
| Female | 76% | 77% | 82% |
| Non-Hispanic white | 61% | 66% | 59% |
| Black/African-American | 27% | 29% | 31% |

# Results: treatment dose, fidelity, retention

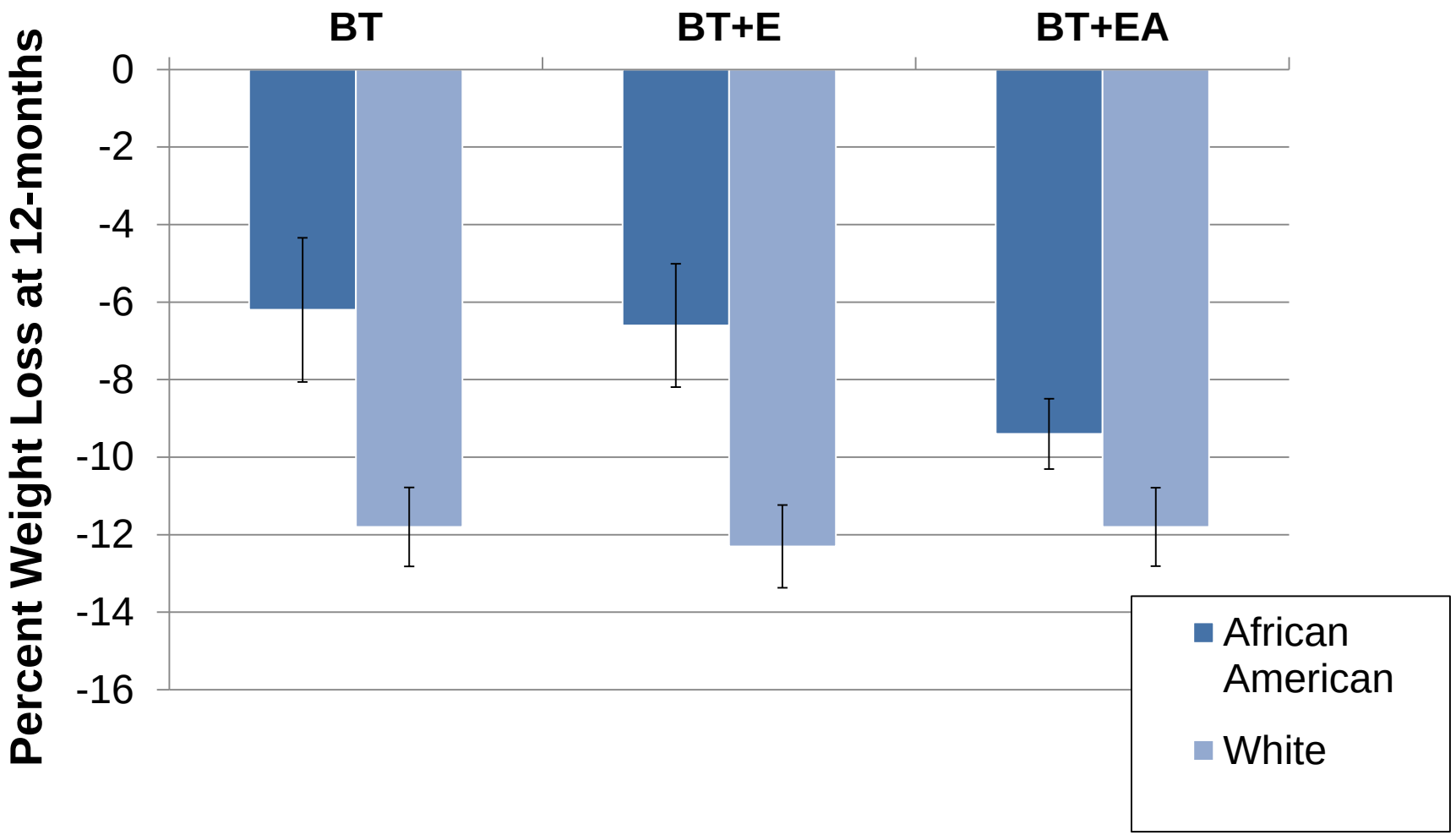
- Adequate dose of treatment provided
  - Participants attended 74.7% of 26 group treatment sessions
  - Attendance did not differ across conditions
- Good retention
  - Assessments completed by 91.2% of participants at 6 months and 85.5% at 12 months
- Clinicians had high fidelity to treatment protocols, based on audiotape ratings

# Efficacy: PWL by treatment condition

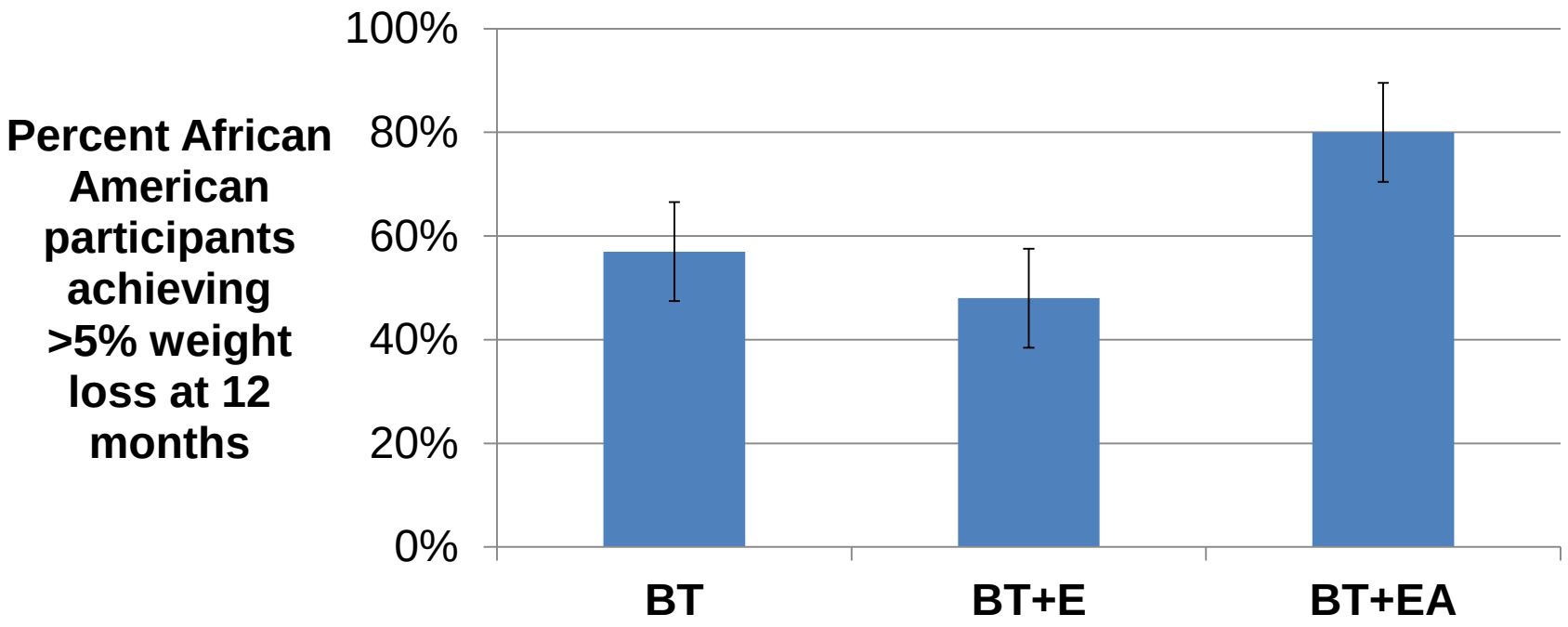



Multilevel modeling found no difference in weight loss trajectory by condition, even when including weight-related covariates (BMI, weight suppression, first 4 weeks weight loss; $p$ = .65)

# Moderation by Race



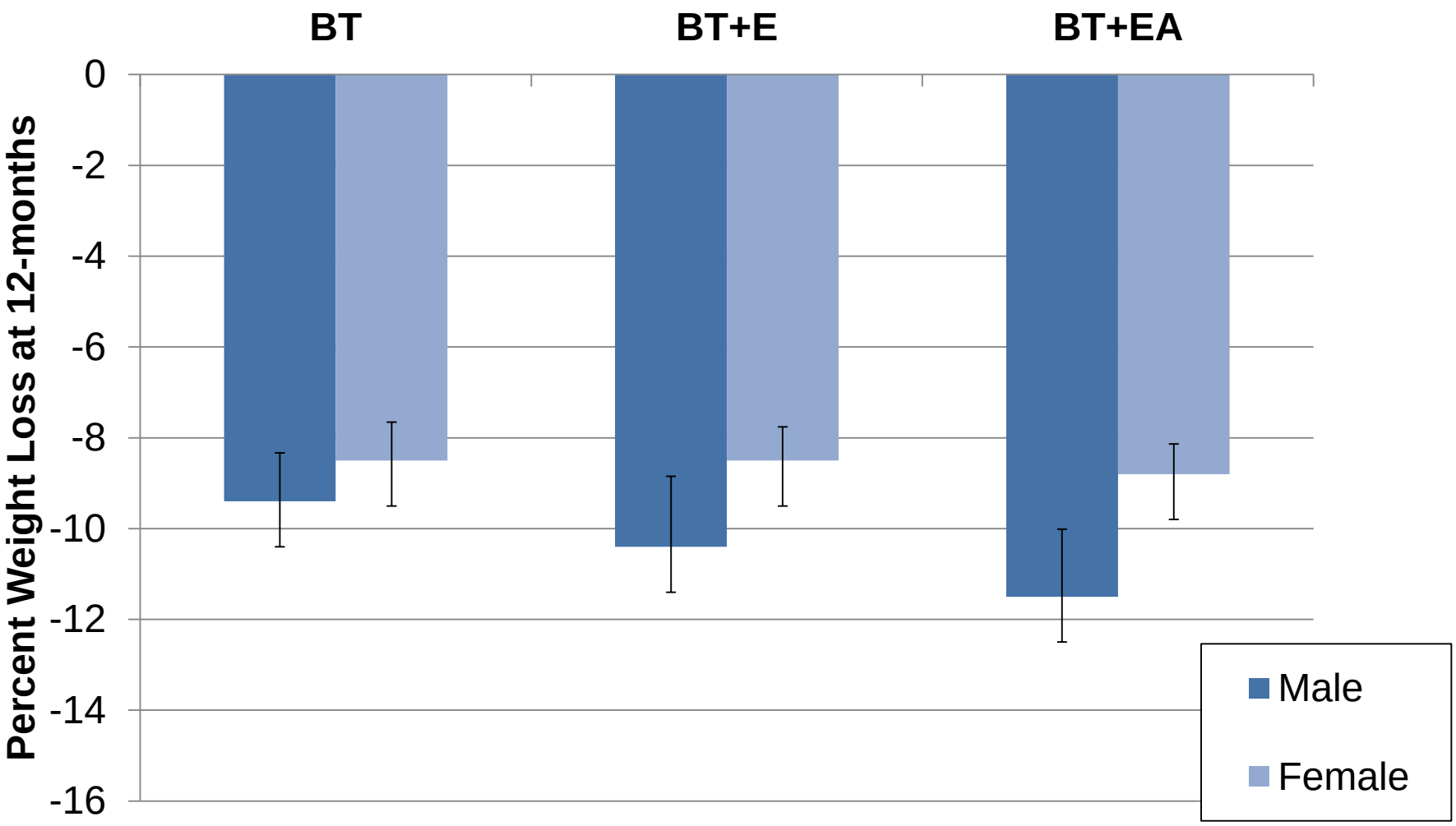

In two-way ANCOVA, race (African-American vs. non-Hispanic white) significantly moderated the effect of condition on weight loss ($p$ = .037)




Among African-American participants, clinically significant weight loss reached most frequently in BT+EA ($p$ = .04)

- Program satisfaction higher among African American participants in BT+EA vs. BT ($p$=.03)
- Trend towards higher attendance of African American participants in BT+EA vs. BT ($p$=.06)

# Moderation by Sex




Sex did not moderate effect of treatment condition on weight loss ($p$ = .73)

# Conclusions

- Enhancing BT with environmental and acceptance-based components did not improve weight losses, on average
  - Inconsistent with previous research showing benefit of acceptance based skills (Forman et al., 2013, 2016)
  - Insufficient dose of ACT included in treatment?
- Treatment response did not depend on sex
  - Inconsistent with previous research showing greater benefit of home environment intervention for women vs. men (Gorin et al., 2013)
  - One key difference: self-initiated environmental change vs. study-provided

# Conclusions

- Inclusion of acceptance-based treatment skilled improved efficacy and acceptability for African-American participants
  - Notable promise, given challenge of addressing race disparities in outcome
  - Possible: values clarity (individuals with less body dissatisfaction or motivation not as rooted in cultural factors), biological differences in rate of WL (which requires enhanced commitment), environmental factors (time, effort available) need enhanced acceptance/willingness
- Future directions: longer follow-up, mechanisms of action for race moderation effect

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