



# NOPREN PEDIATRIC OBESITY HEALTH SERVICES RESEARCH WG

August 23, 2023 Webinar

# Agenda

- Introduction to the Pediatric Obesity Health Services Research WG & Leadership
- Webinar
- WG Logistics & Details

# Work Group Mission Statement

The Pediatric Obesity Health Services Research Work Group focuses on the advancement of the study and implementation of pediatric obesity treatment and research methodologies among health practitioners, researchers, decision makers, government staff, health economists, evaluators, and community members and leaders.

**The mission of the Pediatric Obesity Health Services Research Work Group is to advance the equitable prevention and treatment of childhood obesity and co-occurring conditions in the United States.**

This work group aims to build a network of interdisciplinary members to synergize efforts, identify and answer gaps, and advance implementation of evidence-based practices and policies for pediatric obesity prevention and treatment.

# Work Group Objectives (1-3)

- Cultivate **high quality** health services and implementation science research and increase evaluation **capacity** focused on the prevention, treatment, and management of pediatric obesity
- Identify and describe **disparities** in accessing and engaging in pediatric obesity prevention and treatment to reduce barriers, improve acceptability to caregivers, catalyze action, and promote **health equity**
- Inform policies and practices that improve medical and public health practice as well as healthcare **reimbursement and program sustainability** for pediatric obesity

# Work Group Objectives (4-6)

- Connect researchers, evaluators, public health practitioners, non-profit organizations, individuals with lived experience, and healthcare providers to raise awareness and advance the **dissemination** of evidence-based pediatric obesity **policies, programs, and practices** into clinical and community settings
- Disseminate timely, state of the science **methodologies**, tools, and other resources that facilitate utility of EHR data for pediatric health services research
- Evaluate **cost-effectiveness** of childhood obesity treatments and inform recommendations to scale and spread state reimbursement policies



# NOT ALL DIETARY CHANGES ARE PROBLEMATIC: THE RELATIONSHIP BETWEEN CHILDHOOD OBESITY TREATMENT AND EATING PATHOLOGY

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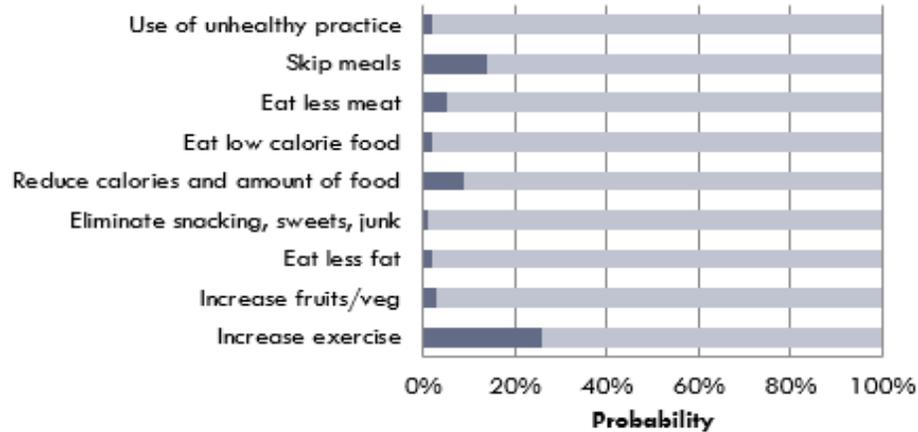
Some of this information was originally presented at the Society of Behavioral Medicine Annual Conference, endorsed by the Child and Family Health and Obesity and Eating Disorder Special Interest Groups

# Overview

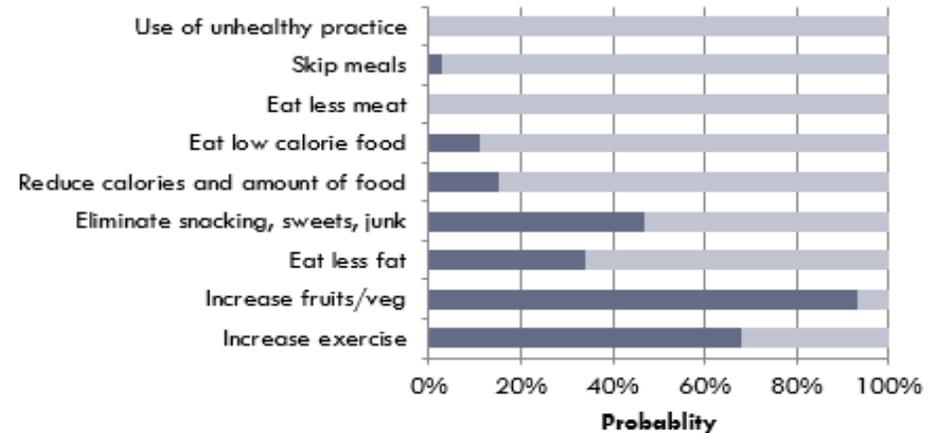
- “Dieting” - the key area of concern
- Dietary changes in treatment are not equivalent to “dieting”
- Dietary changes during treatment are not related to increased eating pathology
- Components of obesity treatment that may be protective
- Obesity treatment and eating pathology
- Clinician recommendations

# “Dieting” – the key area of concern

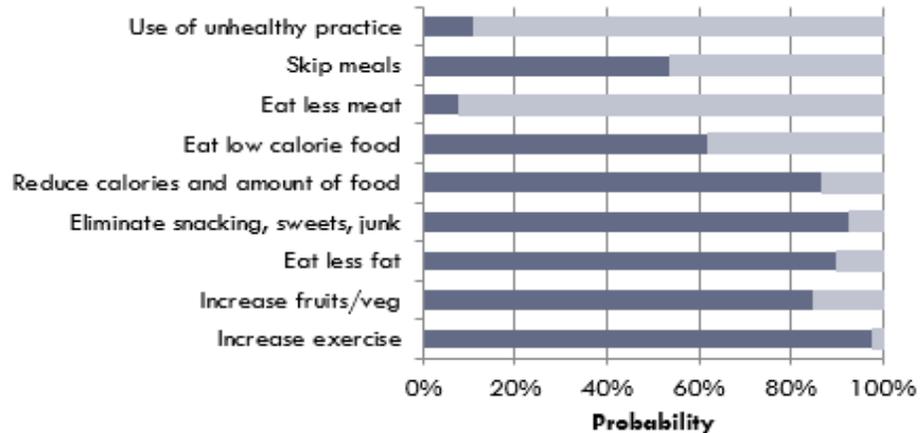
**Non-dieters (26%)**



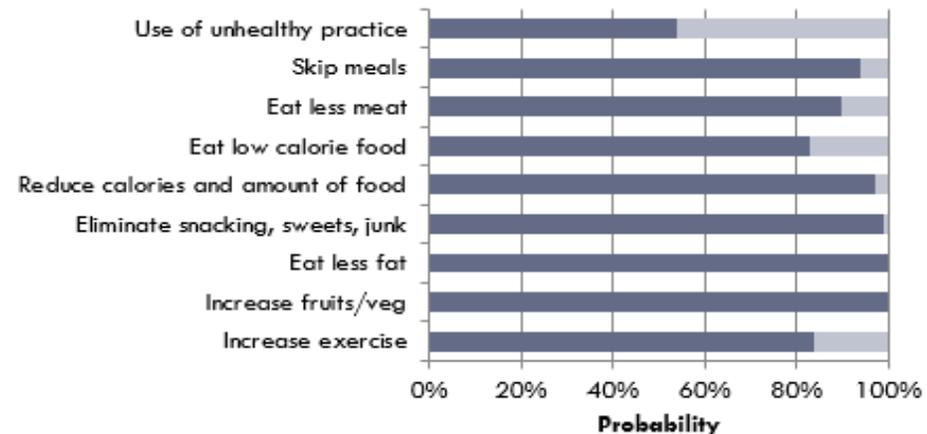
**Lifestyle (16%)**



**Dieters (43%)**



**Extreme Dieters (15%)**



# Dieting classification

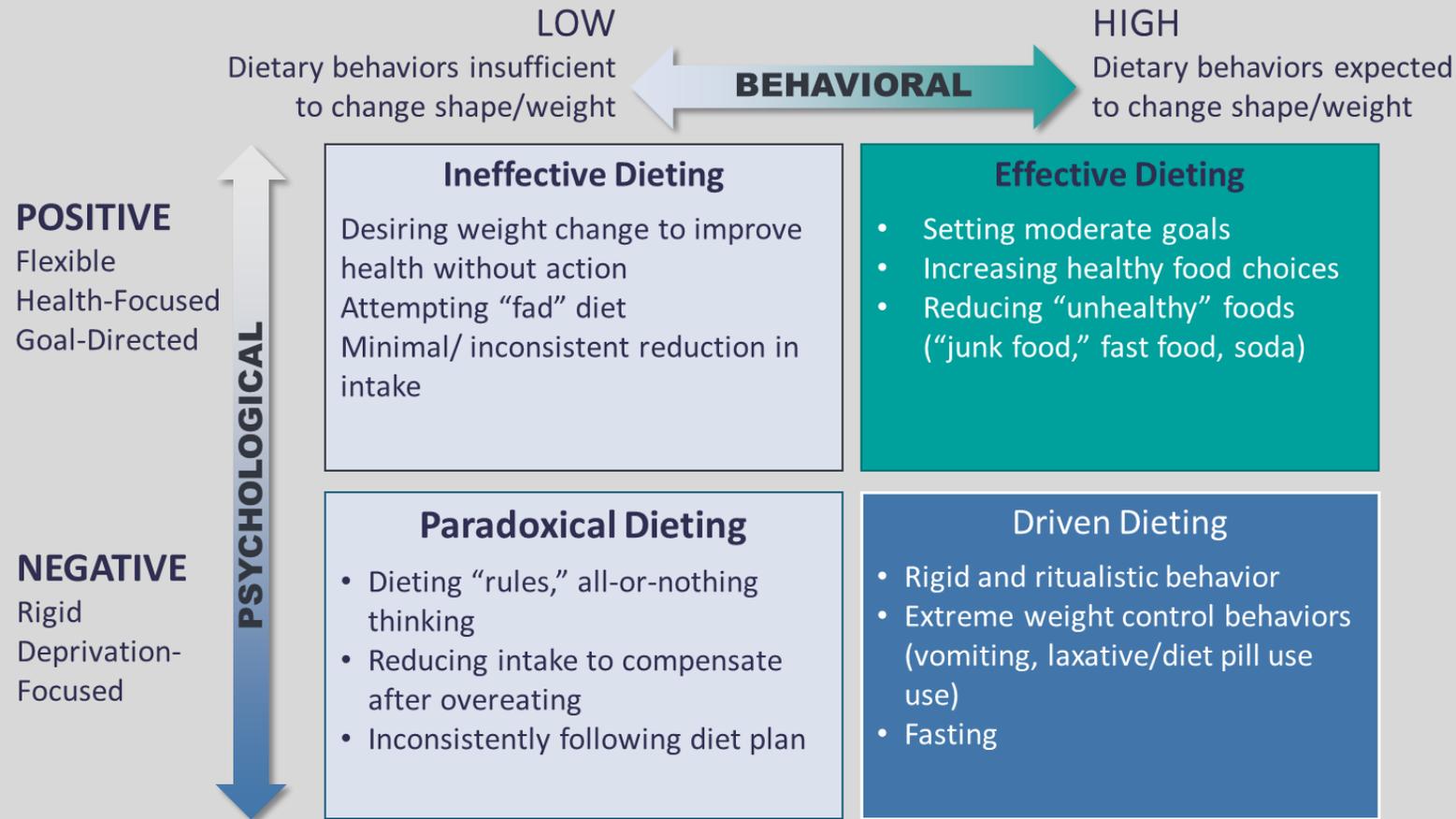
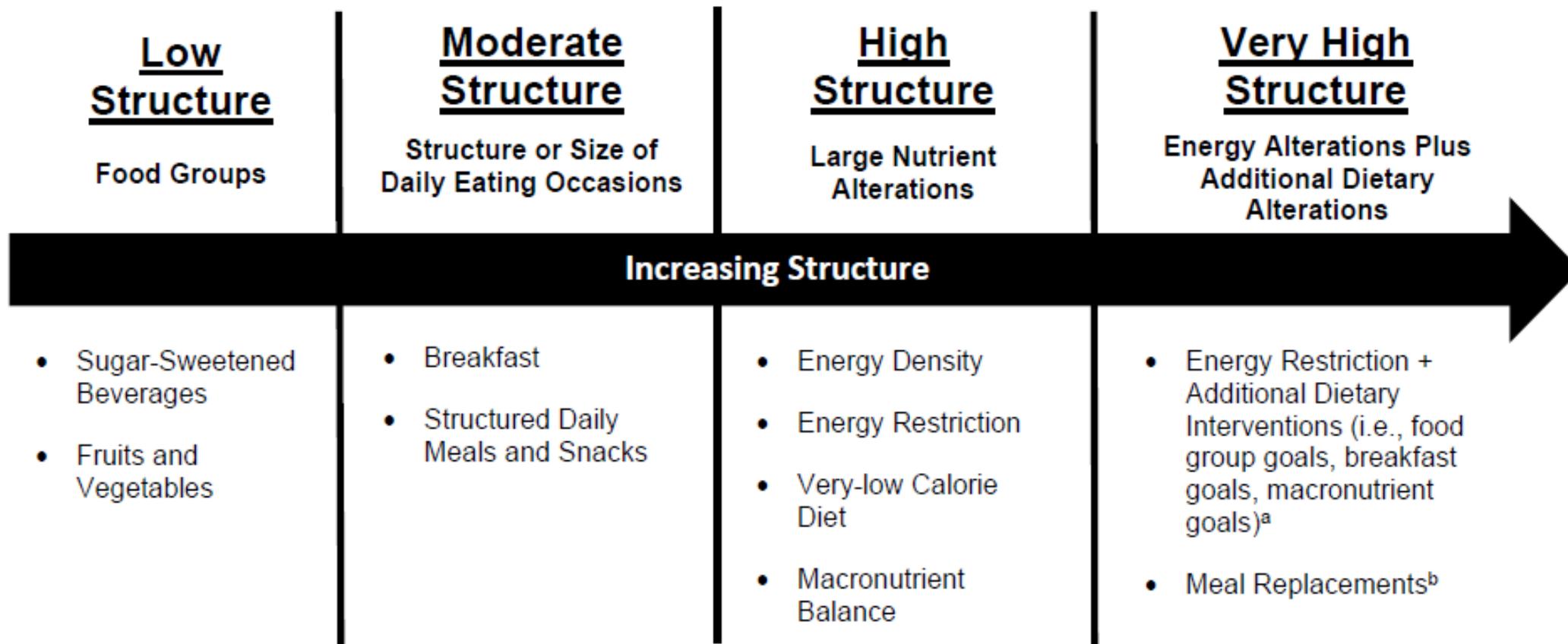


FIGURE 1 Dietary interventions recommended by the Expert Committee<sup>6</sup> for the treatment of child and adolescent overweight and obesity organized by degree of dietary structure



<sup>a</sup>Allows combining of a commonly prescribed high structure recommendation with additional recommendations.

<sup>b</sup>This intervention specifically combines energy restriction, structured daily meals, and macronutrient balance.

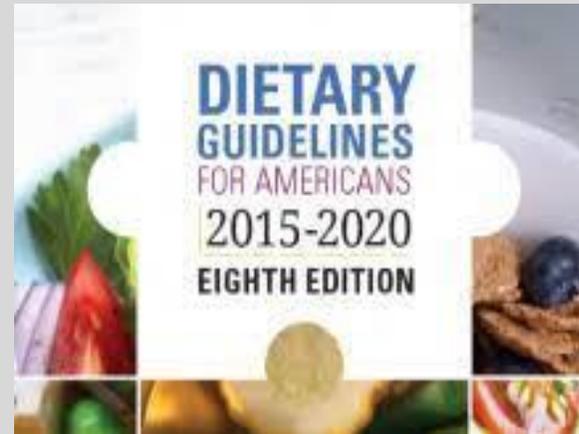


Reducing intake, and particularly  
implementing greater dietary  
structure, creates concerns with  
development of eating pathology  
due to the amount of perceived  
dietary restriction implemented

# TEENS+

- Delivered in weekly 2-hr group meetings, with 1 hr for intervention delivery and 1 hr for supervised exercise sessions
- Individualized diet goals: 1200-1800 kcal/d and number of “Go” foods/d
- Activity goals were  $\geq 1$  hour/day of moderate- to vigorous-intensity physical activity
- Sessions included a behavior therapy approach, with participants self-monitoring daily dietary intake and physical activity from which they received personalized feedback, using a self-regulation framework

# Measures



- The Eating Disorder Examination-Questionnaire (EDE-Q) measured eating pathology (total score and subscales: restraint; and eating, weight, and shape concern)

	Pre-treatment Mean ± SD	Post-treatment <sup>a</sup> Mean ± SD	F value (q value <sup>b</sup> )
<u>Dietary intake and quality</u>			
Energy (kcal/day)	1765 ± 508	1473 ± 461	39.9 (<.001)
HEI Overall Score <sup>c</sup>	51.0 ± 12.8	55.5 ± 13.2	7.3 (.034)
HEI Increase Subscore <sup>d</sup>	31.0 ± 8.5	34.4 ± 8.8	10.3 (.011)
HEI Decrease Subscore <sup>e</sup>	19.9 ± 5.4	21.2 ± 5.6	2.5 (.430)
<u>EDE-Q<sup>f</sup></u>			
Total Score	2.1 ± 1.1	2.0 ± 1.0	0.5 (.860)
Restraint Subscale	1.3 ± 1.2	1.9 ± 1.3	17.1 (<.001)
Eating Concern Subscale	1.3 ± 1.1	1.3 ± 1.2	0.1 (.959)
Shape Concern Subscale	2.8 ± 1.6	2.3 ± 1.5	12.9 (.004)
Weight Concern Subscale	2.9 ± 1.4	2.4 ± 1.2	9.3 (.015)
<sup>a</sup> Post-treatment was at 4-month time point; <sup>b</sup> q-values are corrected p-values using False Discovery Rate for multiple testing; <sup>c</sup> Possible range=0-100, with higher scores indicating better dietary quality; <sup>d</sup> Possible range=0-60, with higher scores indicating better dietary quality; <sup>e</sup> Possible range=0-40, with higher scores indicating better dietary quality; <sup>f</sup> Possible range=0-6, with higher scores indicating greater eating pathology. EDE-Q=Eating Disorders Examination – Questionnaire; HEI=Healthy Eating Index; SD=standard deviation.			

# Family-Based Treatment (FBT) for childhood obesity

- Targets lifestyle (diet, physical activity) behaviors in both children and caregivers using Traffic Light Plan
- Recognizes that knowledge alone is not sufficient
- Core behavior change strategies include: positive parenting, self-monitoring, reinforcement, and stimulus control
  
- Core components in common with CBT for eating disorders
  - Meal planning
  - Regular eating
  - Focus on diet quality, flexible diet plan
  - Regular (but not too frequent!) weigh-ins



# FBT in relation to ED pathology and weight

- Groups (Total N = 175)
  - 1) Low ED Pathology (36%),
  - 2) Shape and Weight Concern (39%),
  - 3) Only Loss Of Control (LOC) (11%), and
  - 4) High ED Pathology (14%)
- No difference in attendance or treatment completion
- Shape and weight concerns decreased with greatest decreases in HIGH and SWC
- zBMI was reduced from baseline to post treatment in all groups, but high ED pathology group did not reach clinical significance
- Weight and shape concern change weakly correlated with zBMI change, suggesting that the decreases in ED pathology are not dependent on amount of weight loss

	Total sample (n=183)		Low ED Pathology (LOW; n=66)		Shape and Weight Concerns (SWC; n=71)		Only Loss of Control (OLOC; n=19)		High ED Pathology (HIGH; n=27)	
	Pre-FBT	Post-FBT	Pre-FBT	Post-FBT	Pre-FBT	Post-FBT	Pre-FBT	Post-FBT	Pre-FBT	Post-FBT
<b>Weight concern</b>	2.59 (1.45)	2.17 (1.28)*	1.29 (0.54)	1.30 (0.68)	3.42 (0.83)	2.65 (1.15)*	1.47 (0.44)	1.51 (0.80)	4.62 (1.02)	3.64 (1.34)*
<b>Shape concern</b>	2.36 (1.58)	1.91 (1.34)*	1.07 (0.55)	1.10 (0.68)	3.08 (1.15)	2.38 (1.29)*	1.26 (0.48)	1.05 (0.52)	4.66 (1.15)	3.44 (1.27)*
<b># LOC episodes</b>	1.28 (3.68)	0.57 (1.76)*	0.00 (0.00)	0.18 (0.53)*	1.40 (3.89)	0.67 (2.06)	2.53 (2.12)	0.79 (2.32)*	3.35 (6.50)	1.12 (2.25)

\* p < 0.05

	Total Sample (N = 241)	Low ED Pathology (LOW; n=83)	Shape and Weight Concerns (SWC; n=97)	Only Loss of Control (OLOC; n=24)	High ED Pathology (HIGH; n=37)
<b>zBMI</b>	-0.28 (0.24)	-0.35 (0.29) <sup>a</sup>	-0.26 (0.19) <sup>b</sup>	-0.34 (0.22) <sup>ab</sup>	-0.16 (0.17) <sup>c</sup>
<b>% overweight</b>	-13.16 (8.23)	-14.75 (8.03) <sup>a</sup>	-13.57 (7.95) <sup>a</sup>	-13.46 (7.34) <sup>a</sup>	-7.99 (8.43) <sup>b</sup>

Group means for a given variable sharing the same superscript are not significantly different from each other (p < .05)

# Reductions in ED Symptoms Following FBT

FBT did not increase ED attitudes and led to decreases in ED behaviors

**TABLE 1** Descriptive data of eating disorder attitudes and behaviors assessed across assessment time points

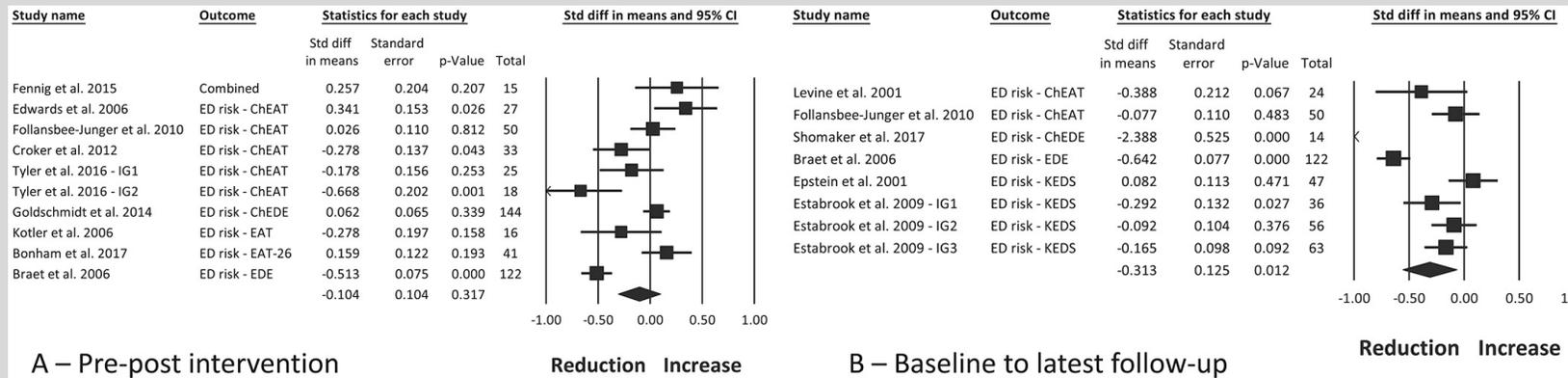
	Baseline (n = 149–150)	Post-Tx (n = 122 or 123)	6-mo FU (n = 125)	18-mo FU (n = 109–111)
ED attitudes, M (SD)				
Global	1.39 (0.98)	1.11 (0.83)**	1.14 (0.93)**	1.14 (0.98)**
Restraint	1.25 (1.13)	1.28 (1.08)	1.11 (1.05)	1.09 (1.03)
Eating concern	0.85 (0.98)	0.48 (0.67)***	0.61 (0.8)***	0.49 (0.76)***
Weight concern	1.72 (1.17)	1.36 (1.12)**	1.45 (1.2)**	1.52 (1.28)
Shape concern	1.76 (1.39)	1.33 (1.25)***	1.41 (1.35)**	1.53 (1.38)
ED behaviors, %				
LOC	27.5	16.3*	—	16.2*
Self-induced vomiting	0	0	—	0

*Note.* ED = eating disorder; LOC = loss of control; Post-Tx = posttreatment; 6-mo FU = 6-month follow-up; 18-mo FU = 18-month follow-up.

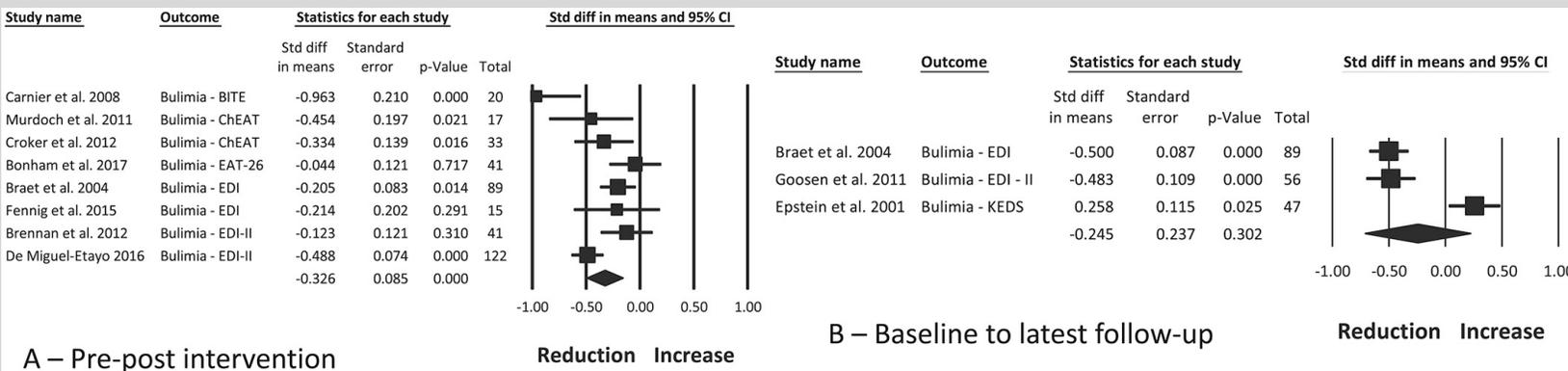
\* $p < 0.05$ .; \*\* $p < 0.01$ .; \*\*\* $p < 0.001$ .

# Treatment of obesity, with a dietary component, and eating disorder risk in children and adolescents: A systematic review with meta-analysis

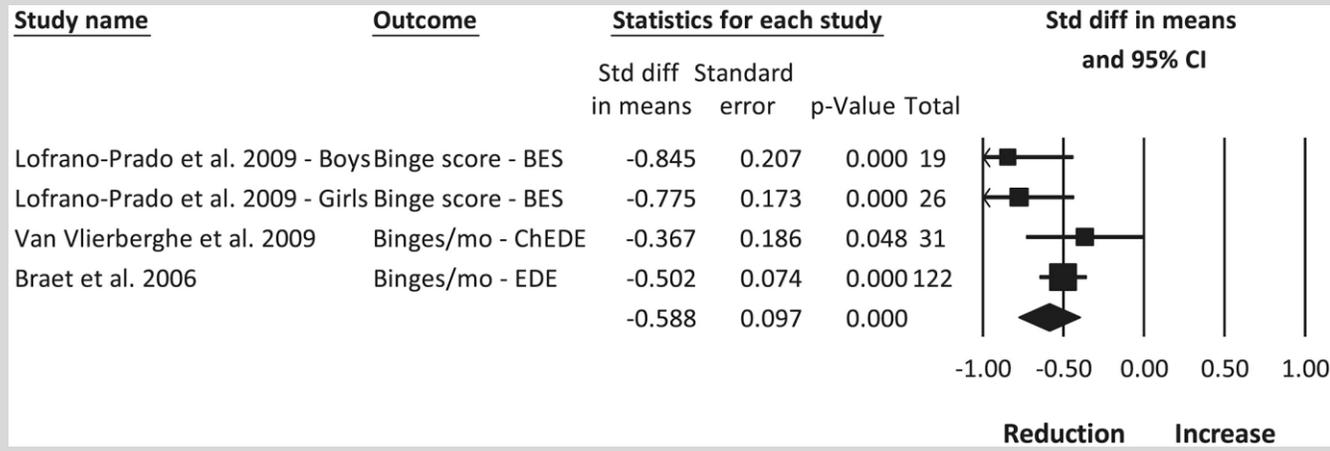
Hiba Jebeile<sup>1,2</sup> | Megan L. Gow<sup>1,2</sup> | Louise A. Baur<sup>1,2</sup> | Sarah P. Garnett<sup>1,2</sup> | Susan J. Paxton<sup>3</sup> | Natalie B. Lister<sup>1,2</sup>



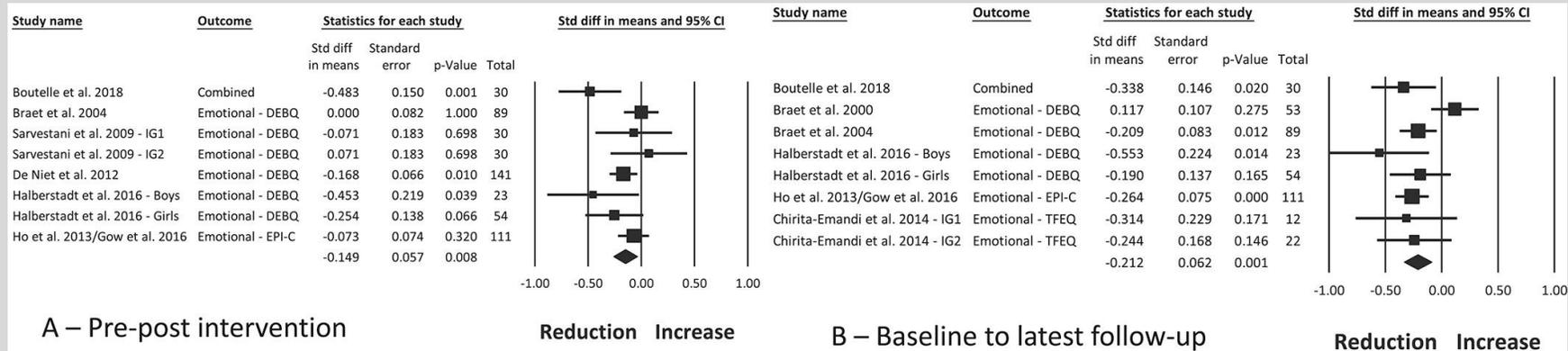
Overall ED risk



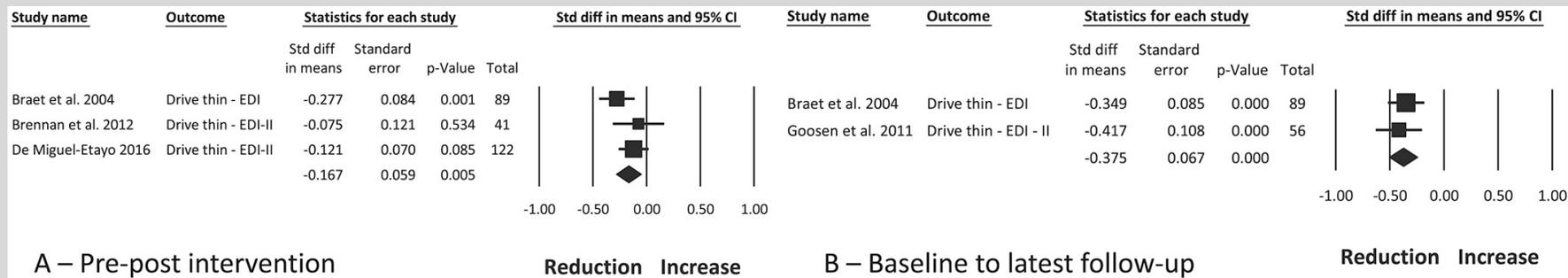
Bulimic symptoms



Binge symptoms

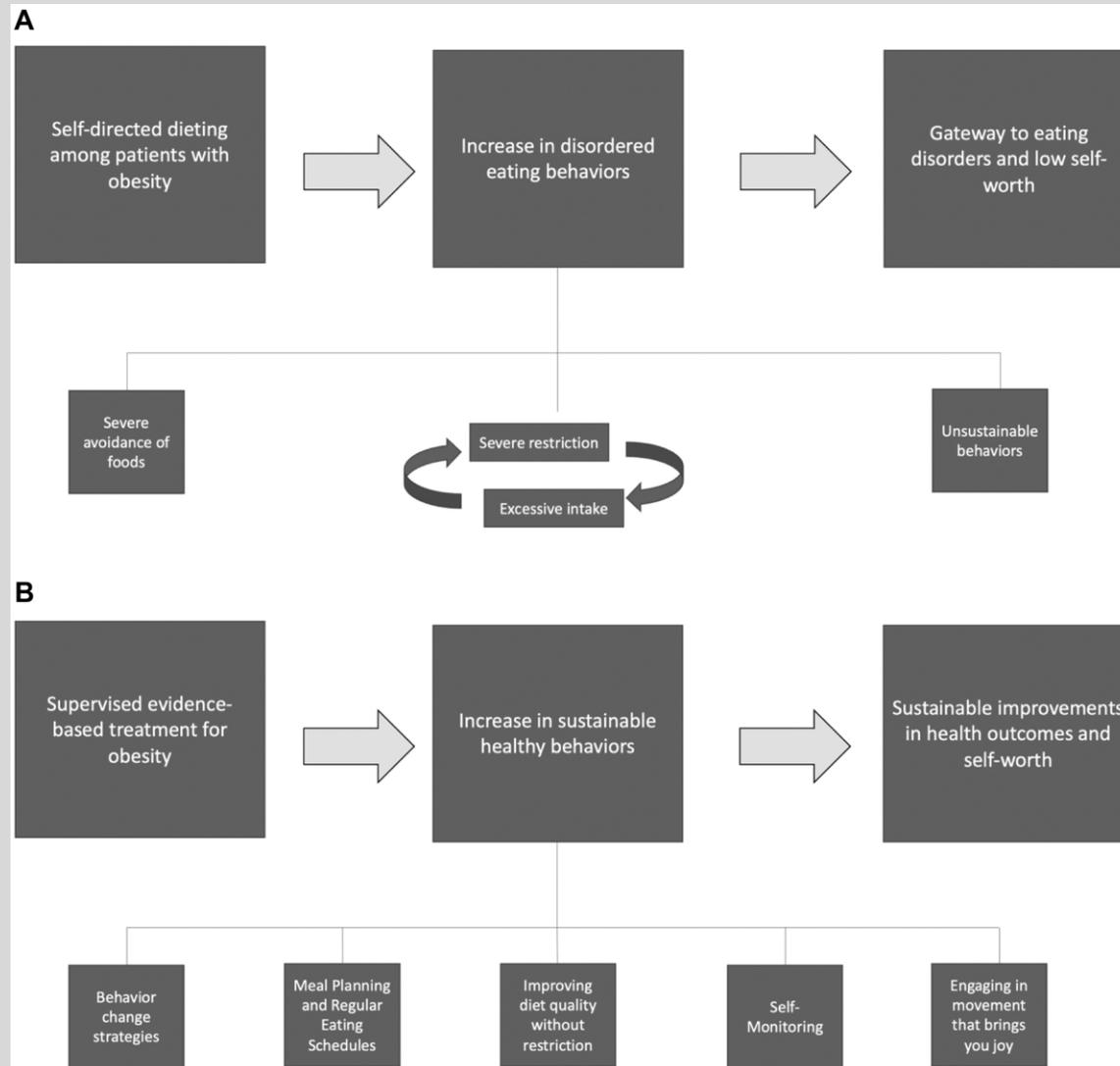


Emotional eating



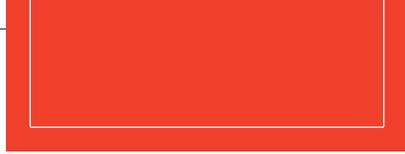
Drive for thinness

# Difference between “dieting” and obesity treatment



# For Clinicians

- Treatment of obesity in children and adolescents doesn't increase eating pathology and does appear to provide health benefits
- Clinicians can:
  - Provide accurate information to help decisions to be informed
  - Engage in shared decision making
  - Support the decisions of families
  - Provide access to obesity treatment for those who are interested and for whom it is appropriate to support health equity



# QUESTIONS AND DISCUSSION

# Next Steps

- Keep an eye out for our September webinar: Pediatric bariatric surgery and multidisciplinary support
- Want to join the Pediatric Obesity Health Services Research WG?
  - Email Alyssa Button- [alyssa.button@pbrc.edu](mailto:alyssa.button@pbrc.edu)
- Want to join the broader NOPREN listserv?
  - Sign up at <https://lp.constantcontactpages.com/su/Yrxe2dc/NOPRENlistserv>  
Or learn more about NOPREN at <https://nopren.ucsf.edu>