



University of California
San Francisco

The Impact of a Child Care Healthy Beverage Intervention on Beverage Intake and Obesity

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Presentation Goals

- Importance of healthy beverage intake in child care
- Intervention development and study design
- Intervention impact on beverage intake and obesity
- Conclusion and next steps

Background

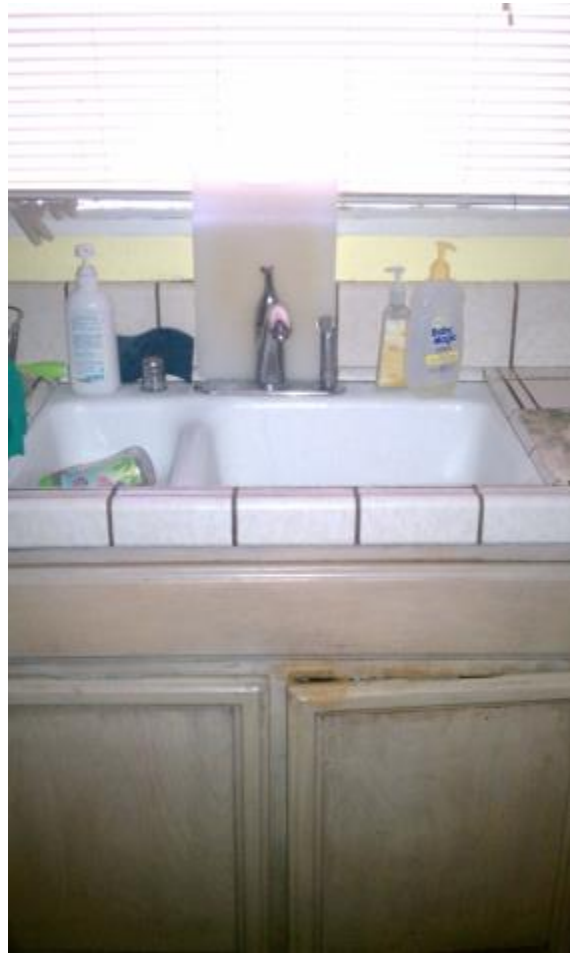
Why Encourage Healthy Beverage Intake in Child Care?

- Sugar sweetened beverages contribute to:
 - Excessive intake of sugar and calories
 - Obesity
 - Dental Caries
- Child care ideal for influencing early diet
- It's the law in California (Assembly Bill 2084)

Letter of the Law



Letter of the Law



Spirit of the Law



Spirit of the Law



Objective

- To examine how an intervention to translate the “Healthy Beverages in Child Care” law into practice impacts 2-5 year olds:
 - Beverage intake
 - Prevalence of overweight

Methods

Study Design

- Randomized controlled trial in four child care centers
- San Mateo County, California
 - Low-income areas with highest obesity rates
- Pre-post design
 - Evaluation before and after the intervention

Intervention Development

- Community advisory board
- Formative research
 - Child care provider interviews
 - Parent interviews
 - Child care facility observations

Intervention: Child Care Environment Change

- Drinking water testing and remediation
- Water available for self-serve indoors and outdoors during the day
- Reusable water bottles for home
- Only 1% or skim plain milk and water



Intervention: Education and Promotion

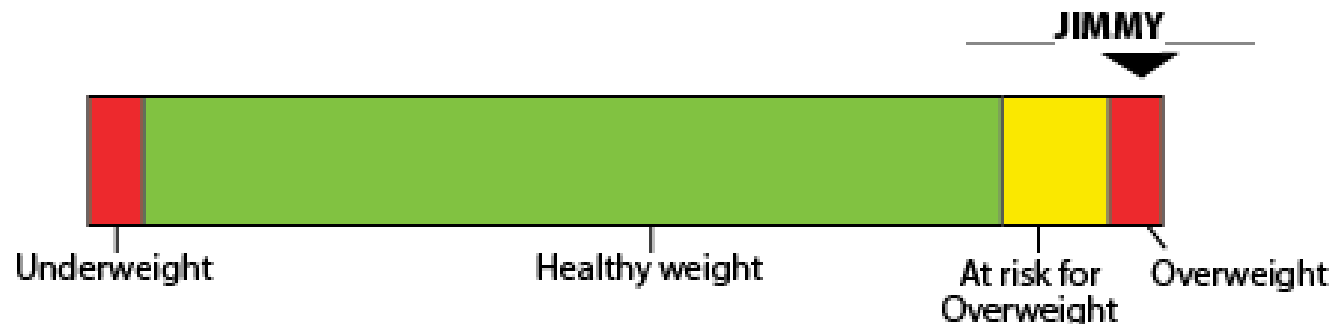
- Child, parent, staff education
 - “Potter Drinks Water” books
 - “Drink More Water” song
 - BMI/beverage reports for centers, parents
 - Sugar training for staff, parents
 - Posters for childcare
 - Handouts for home



Education: BMI Reports

Health Report Card for: Jimmy

In Fall 2013, researchers from the University of California, San Francisco measured your child's height and weight. Your child was **_38_** inches tall and weighed **_41_** pounds. This suggests that your child may be **overweight** and at risk for health problems. You should talk to your child's doctor about his or her weight.



- Doctors worry about children being overweight because 6 out of 10 overweight children already have high cholesterol, high blood pressure, or early signs of diabetes.
- Overweight children will usually become overweight or obese adults and have a high risk for heart disease, diabetes, high blood pressure, and some types of cancer.
- The good news is that even small changes can make a big difference in getting children to a healthy weight.

Education: Beverage Reports

Beverage Report Card for:


What is your child drinking?

In Fall 2013, pediatric researchers at the University of California, San Francisco asked you to tell us what beverages your child drank at home on a normal school day. You said that:

 Your child drank about 3 glasses of different drinks at home. The drinks included:

Whole milk, Danimals smoothie, and bottled water

 Your child drank Whole milk. Remember, if you serve your child milk, doctors recommend you serve only plain (non-flavored) 1% or skim milk.

 The drinks your child drank had a total of about 4 **teaspoons of sugar**. That's as much sugar as 2 lollipops.



Intervention: Policy

- Child care center beverage policy
- Staff and family beverage contract

MY GOALS

Choose ONE goal that you think you can work on in the next month:

- I will not purchase any sugar-sweetened beverages for my home.
- I will only allow my child to have a sugar-sweetened beverage 1 time per week or less.
- I will serve my child whole fruit instead of 100% fruit juice.
- I will make sure water is accessible and visible to my child by offering water in a sippy cup, reusable bottle, or cup on a table where he/she can reach it without help from an adult.
- I will make sure my child can drink water when we are outside the house. I will bring water with us in a: *[check one or more option]*
 - Reusable water bottle.
 - Sippy cup.
 - Single-use bottled water (like Aquafina, Crystal Geysler, or Dasani).
- I will be a good role model for drinking healthy drinks by only drinking milk and water in front of my child.
- When I serve my child milk, I will only serve: *[check one]*
 - Plain (non-flavored) skim (fat-free) milk.
 - Plain (non-flavored) low-fat (1%) milk.
- I will encourage my child to drink healthy drinks by: _____

I will begin working on this goal on: *[write in date]* _____.

Signed: _____ Today's Date: _____

Return this form to your child care center and you will be entered into a RAFFLE for prizes!

Study Outcomes

- Children's beverage intake at home
 - Beverage diaries
- Percentage of overweight children
 - Age and gender adjusted BMI%



Analyses

- Demographic characteristics of child care centers
- Changes in outcomes from pre- to post-intervention between intervention and control centers
 - Ounces of beverages consumed
 - Percent of overweight children ($BMI \geq 85\%$)

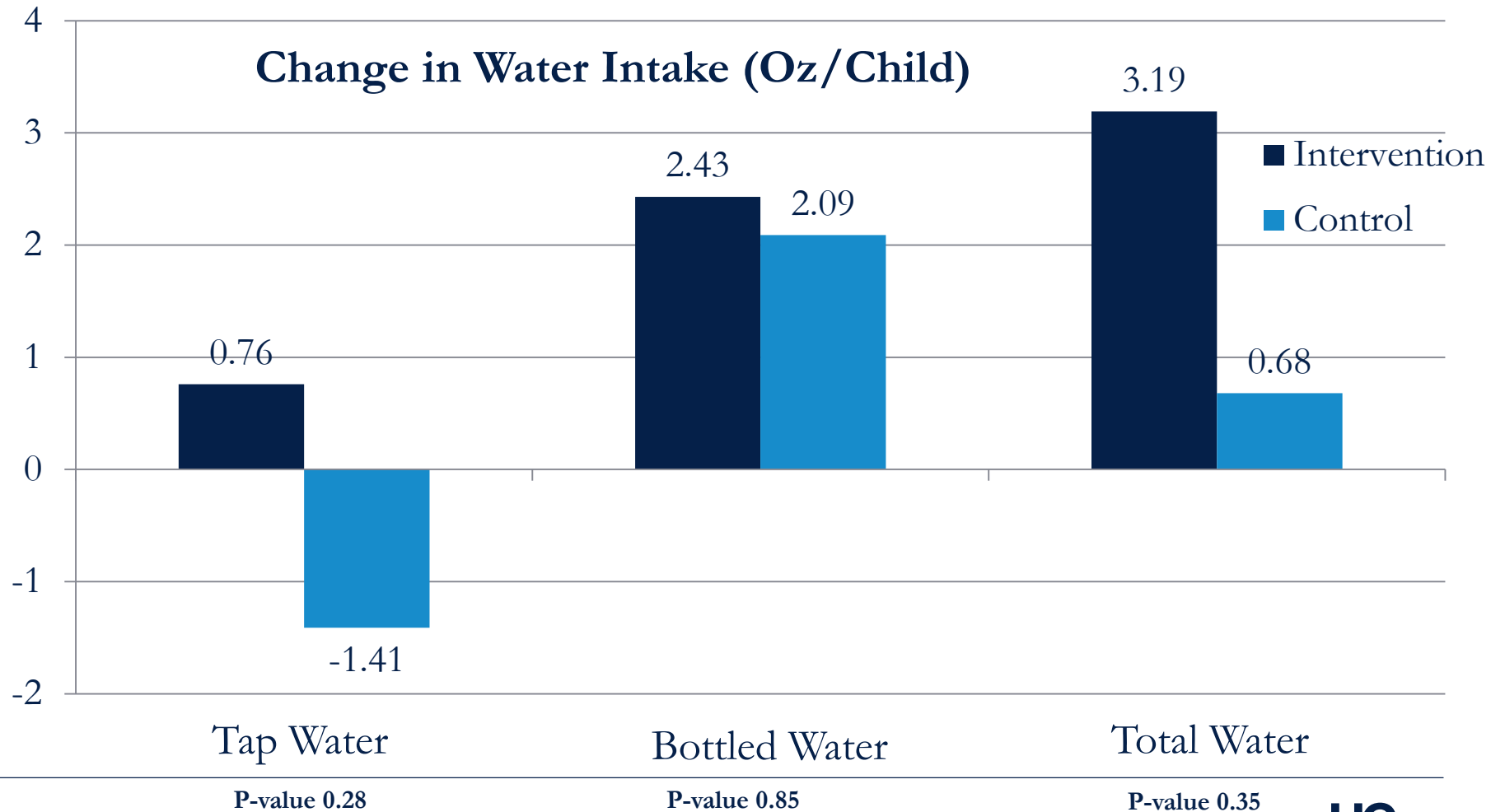
Baseline Child Care Center Characteristics by Intervention Status

CHARACTERISTIC (%)	INTERVENTION (n=10)	CONTROL (n=10)
Age (mean years)^a	4.07	4.32
Female	53%	53%
Latino	62%	52%
Overweight	43%	38%

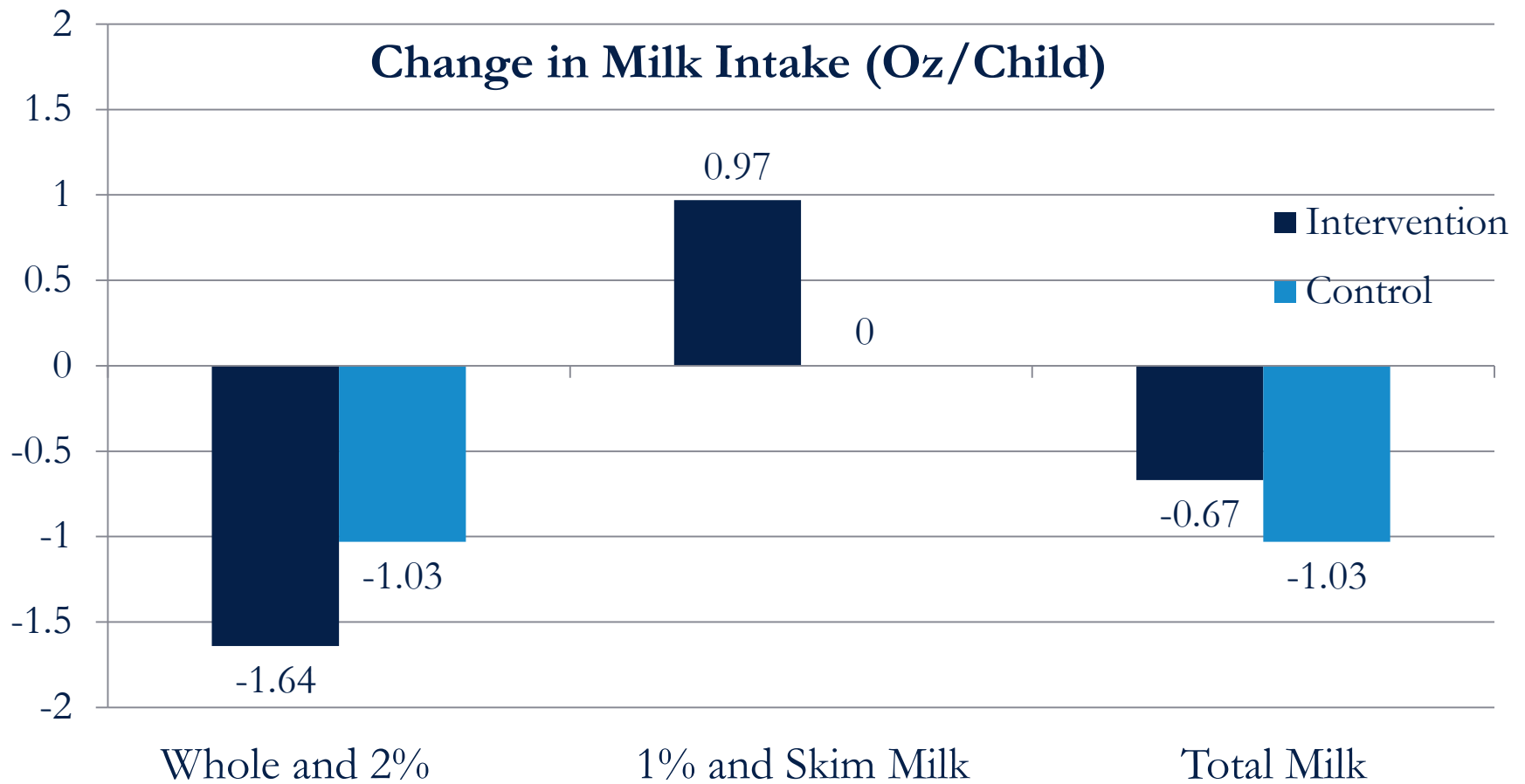
a. P-value <0.05

b. n=155

Intervention Impact on Water Intake



Intervention Impact on Milk Intake



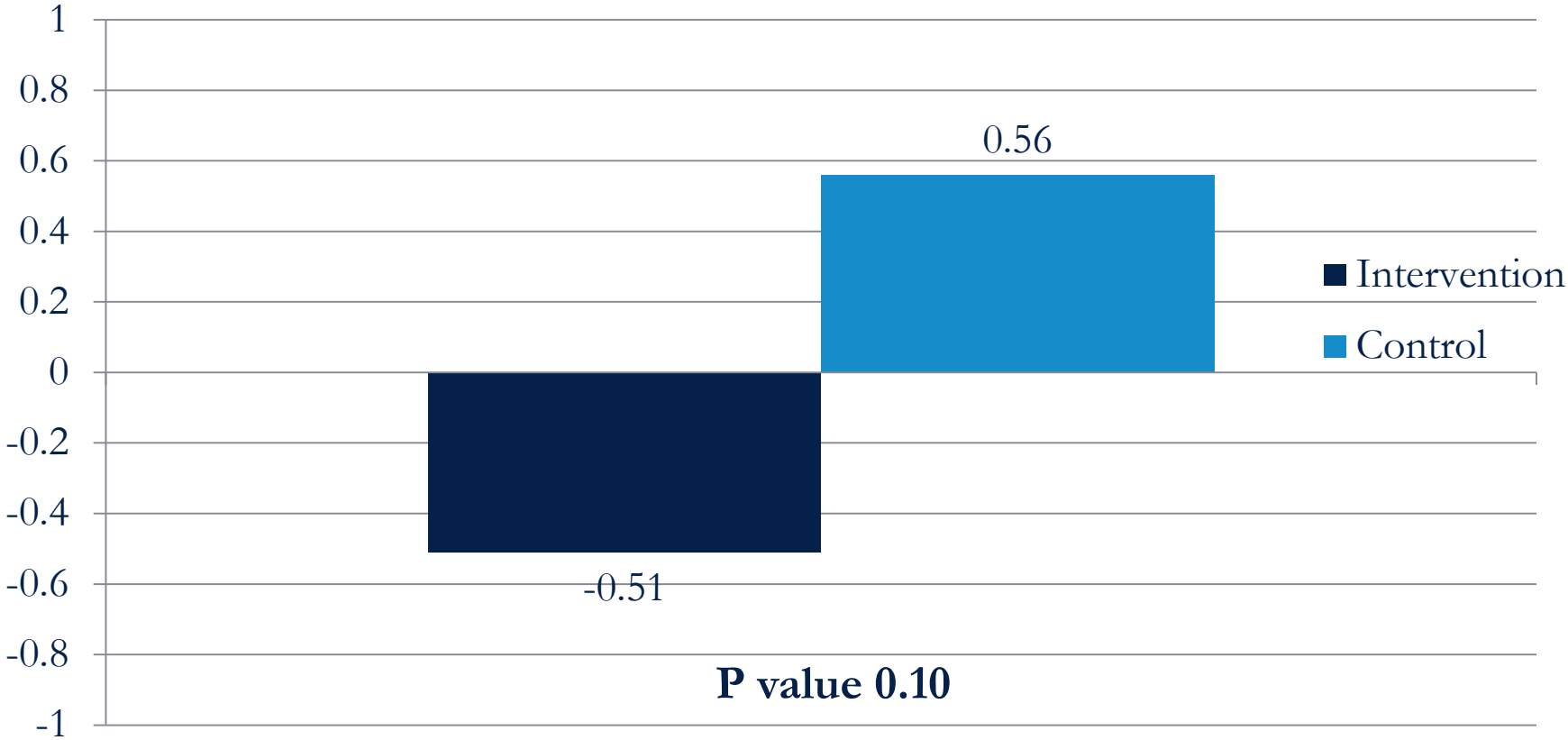
P-value 0.66

P-value 0.15

P-Value 0.80

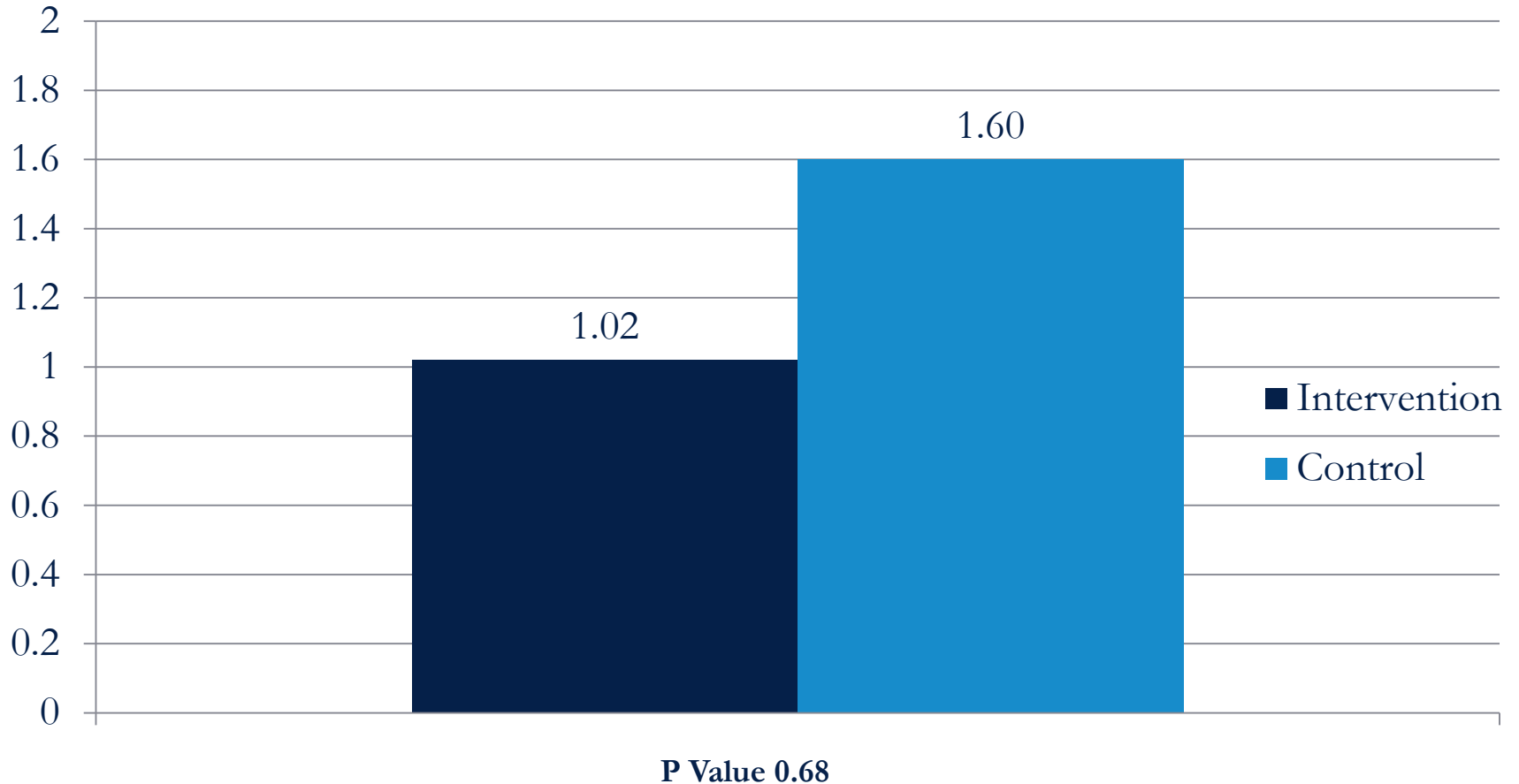
Intervention Impact on 100% Fruit Juice Intake

Change in 100% Fruit Juice Intake (Oz/Child)

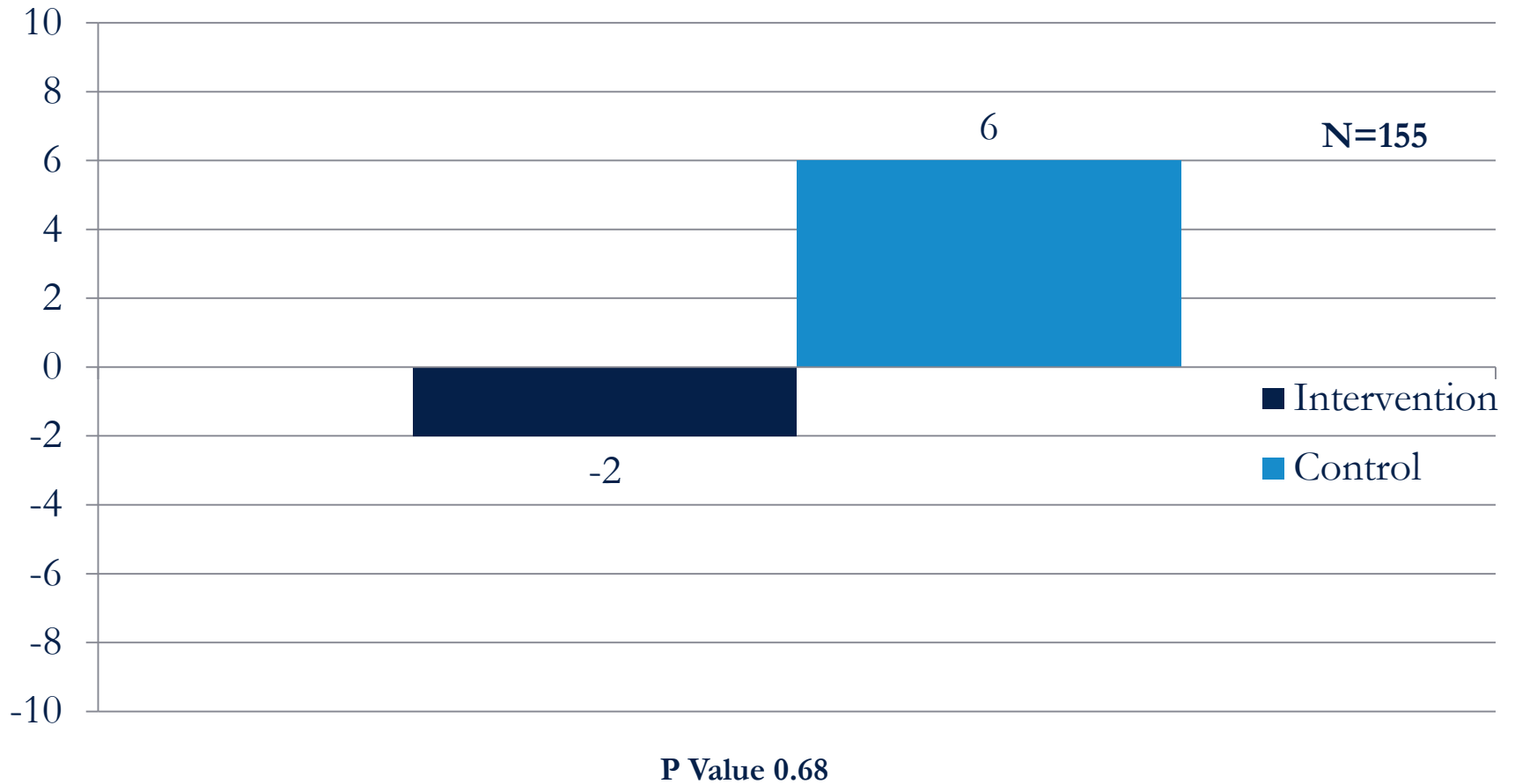


Intervention Impact on SSB Intake

Change in SSB Intake (Oz/Child)



Intervention Impact on the Percentage of Overweight Children



Conclusion

Discussion

- A child care-based healthy beverage intervention led to *positive trends* in children's intake of beverages at home including:
 - ↑ water
 - ↓ whole/2% milk
 - ↑ 1%/skim milk
 - ↓ 100% fruit juice
- The intervention also had a positive trend in reducing overweight

Limitations and Next Steps

■ Limitations

- Small pilot study
- Beverage intake based on self-report
- Results may not be generalizable

■ Next steps

- Intervention will be refined and tested in a larger randomized controlled trial

Thank you!



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