The promotion of water drinking behaviors among children in a Caribbean island: A social network randomized control trial

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INTRODUCTION
- Sugar sweetened beverage (SSB) consumption contributes to childhood obesity.
- The Caribbean region has high rates of overweight and obesity and compared to Western Europe, North-America, and Central Latin America, it has the highest average daily rate of SSB consumption.
- The promotion of water consumption is urgent and needed in Aruba—an island in the Caribbean.
- A social network-based health intervention approach was selected to promote water drinking behaviors.

PURPOSE AND HYPOTHESES
Effectively promote water drinking behaviors among children in Aruba through a social network-based health intervention.

H1: Children in the intervention group will consume (a) more water and (b) less sugar sweetened beverages after the intervention compared to the control group.

H2: Children in the intervention group will have a greater behavioral intent to consume (a) more water and (b) less sugar sweetened beverages after the intervention compared to the control group.

METHODS
Design: A school-based randomized controlled trial.
Trail Registration NTR5666.
Sample: 377 5th and 6th grade primary school children (ages 10-14).
Mean age 11 years (SD = 0.98); girls 54%.
Groups: Treatment group n=192; control group n=185.
Intervention: Children were exposed to peer influences who were trained to promote water consumption—based on a Western-European “Share H2O” program. Infl uential peers were selected by means of sociometric questions at pre-intervention, duration of eight weeks.
Primary outcomes: Water and sugar sweetened beverage consumption and the intention to drink more water and less sugar sweetened beverages. These were self-reported by children at pre- and post-intervention.
Statistical analysis: A two-way repeated measures MANCOVA was performed to determine if children in the intervention group differed after the intervention compared to those in the control group.

RESULTS

Water consumption of children in the intervention and control group did not differ over time; f(1, 347) = .01, p = .91, η² = .00.

The intention to drink more water over time did not differ for children in the intervention and control groups; f(1, 347) = .25, p = .62, η² = .00.

Sugar sweetened beverage consumption of children in the intervention and control group did differ over time; f(1, 347) = 4.72, p = .03, η² = .01.

The intention to drink less sugar sweetened beverages did differ for children in the intervention and control groups; f(1, 347) = 9.1, p = .00, η² = .03.

CONCLUSION
Children in the intervention group consumed less sugar sweetened beverages (SSB) and their behavioral intention to consume it less increased compared to the control group.

The promotion of water consumption and the behavioral intention to consume it more requires closer attention in the future because they remained unchanged after the intervention.

Scientific contribution is being made to Aruba and the Caribbean region in the field of water consumption, SSB consumption, children, and to the emerging literature regarding social network-based health interventions.

REFERENCES