Character Awareness in Advergames Influences Children's Snack Choices and Consumption Patterns

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Introduction

- Childhood obesity is a serious health issue in the United States.[1]

- Media characters are ubiquitous in children's lives & often market unhealthy foods and beverages to children.[2]

- Advergames typically sell unhealthy products,[3] but advergames that promote healthier snack choices increase children's selection & consumption of healthier snacks.[4]

- Repeated exposure to marketed messages is important for effective marketing,[5] but the role of conscious awareness to marketed messages for children remains poorly understood.

- **Purpose:** to examine if young children's snack choices & consumption patterns involve conscious awareness of the foods and drinks that a popular media character is depicted with in an app.

Hypotheses

- Children who see Dora with healthy products will be more likely to select & consume healthy snacks compared to children who see Dora with unhealthy products, with the control group falling in the middle.

- Children who are consciously aware of Dora in the app will be more likely to select snacks Dora is depicted with, compared to children who are not aware of Dora in the app.

Methods

- Preschool children (M_{age} = 4.80 yrs., SD = 0.48; N = 131; 55% boys) played an iPad advergame twice for an average of 5.56 minutes.

- Children randomly assigned to: Dora healthy condition, Dora less healthy condition, or a no Dora exposure control group.

Healthy   Unhealthy   Control
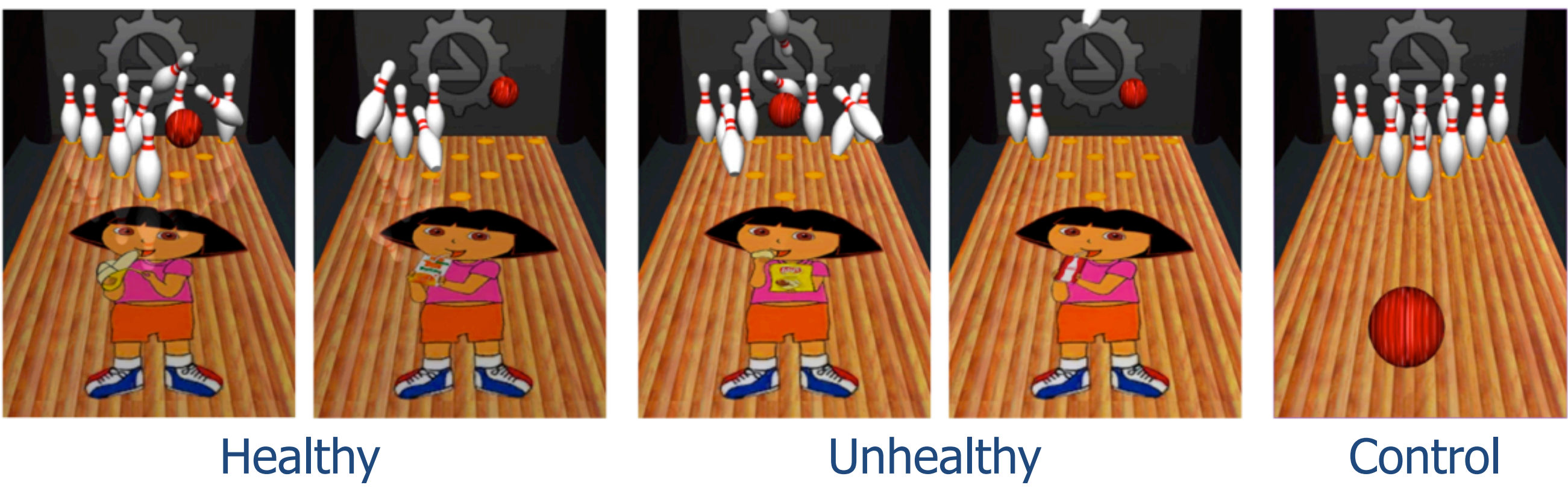
- Awareness of Dora in the app was measured by children:
1) spontaneously saying Dora's name while playing, and/or
2) recalling Dora in the game after snack selection.


Did you see anyone in the game?
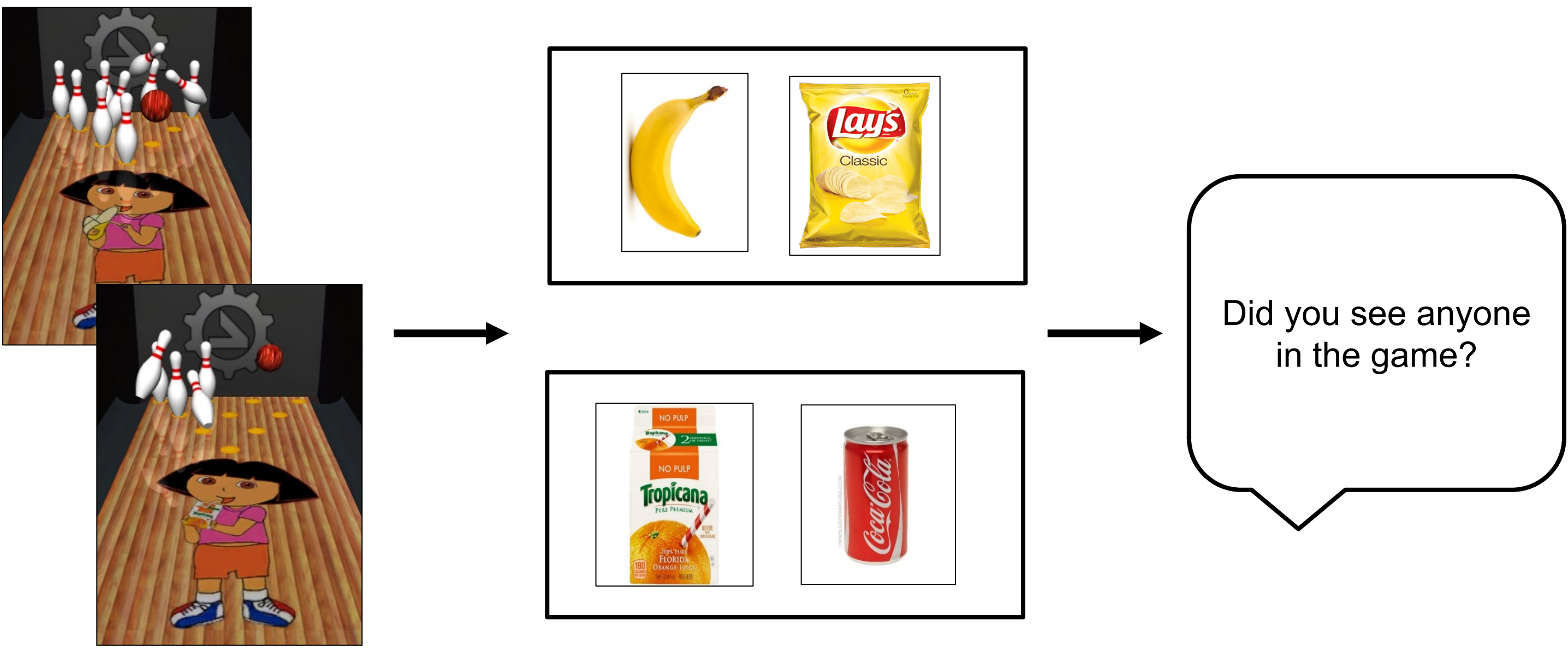
Results

Percent of Children Selecting 0, 1, or 2 Healthy Snacks by Awareness of Dora in the App and Condition (N = 131)

	Number of Healthy Snacks Selected		
	0	1	2
Healthy Condition			
Children Aware of Dora (n = 15)	13%	80%	7%
Children Not Aware of Dora (n = 29)	38%	55%	7%
Unhealthy Condition			
Children Aware of Dora (n = 12)	58%	42%	0%
Children Not Aware of Dora (n = 31)	29%	55%	16%
Control Condition (n = 44)	21%	68%	11%

Overall Analysis: No significant effect of treatment conditions when compared to the control group in an ordered logistic regression (N = 131) predicting the number of healthy snacks selected (0, 1, or 2) by children; treatment conditions did not differ significantly from each other.

Treatment Condition Analysis: Ordered Logistic Regression Analysis Predicting the Number of Healthy Snacks Selected and Consumed by Character Awareness & Treatment Condition (n = 87)

Predictor	Odds Ratio	SE	p
Healthy Condition	0.552	0.313	0.295
Awareness of Dora in the App	0.228*	0.158	0.033
Awareness of Dora in the App × Healthy Condition	10.340**	9.171	0.008

** $p \leq 0.01$, * $p \leq 0.05$

Discussion

- Children's food and beverage selection & consumption was only impacted when they were consciously aware of Dora in the app.

- Children aware of Dora, a popular media character, in the bowling app were more likely to select and consume products that she was associated with, for both healthy and unhealthy items.

- The selection of products associated with Dora may occur through classical conditioning: i.e., conscious awareness of the association between fun & Dora may impact children's food and beverage choices & consumption patterns.

- This process occurred quickly, with almost 1/3 of the sample becoming cognizant of Dora's onscreen presence within a mere five minutes of app-play.

- Advergames featuring popular media characters promoting healthier products could lead to healthier eating patterns, and in turn, combat the obesity epidemic.
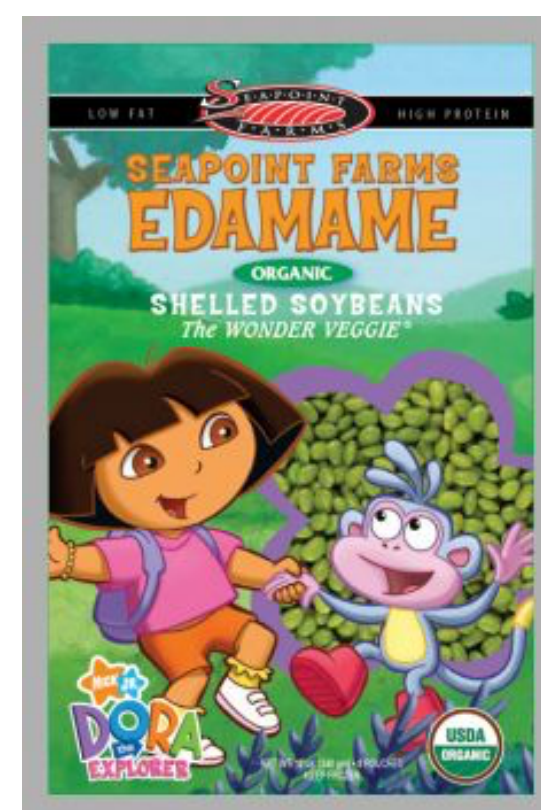
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