# "Where Does My Food Go?" **Developing a Book to Support Healthier Eating Habits in Preschool-Aged Children** Denaya Elkins-Torres, Rachel E. Blaine DSc, MPH, RDN, Wendy Devine, MPH, RD, Nancy Dayne EdD **Department of Family & Consumer Sciences College of Health & Human Services, California State University Long Beach**

### Introduction

Childhood obesity is a national issue correlated with various diseases such as diabetes and NAFLD. An increase in processed foods and sedentary lifestyles are major contributors to childhood obesity.

The CDC states between 2007 and 2010, 67% of children did not meet daily fruit recommendations and 93% of children lacked sufficient vegetable consumption (2014). Early introduction to foods such as fruits and vegetables may be beneficial to the development of dietary patterns.

The creation of an educational, age-appropriate book for preschool-aged or pre-kindergarten children will help introduce the topic of nutrition, different nutrients, and the basics of healthy meals.

**Purpose:** To develop an introductory nutrition book for young children across the U.S. to support the familiarization and incorporation of healthy foods. This book will also introduce young children to fruits and vegetables, digestion, and basic biological function using the incorporation of texture and imagery to maximize fruit and vegetable consumption as they grow.

# Methods

- 1. Literature review Determine the need for a children's educational nutrition book.
- 2. Determine factors related to the development of children's eating habits -breastfeeding, parenting behavior styles, and parents' eating patterns.
- 3. Determine how this nutritional education book can be beneficial to children. Determine the most effective ways to deliver the message to children and for them to retain it for future use.
- 4. Conduct market research: best-selling books and book characteristics and infer why they are most popular. Identify and compare available nutrition/food-related books.
- 5. Development of the prototype using Piaget's stages of development. The plot includes food traveling down the gastrointestinal system.
- 6. Collaboration with a graphic designer (Jgardesigns) to create images. Texturize images.
- 7. Creation of a parent handout to be included.
- 8. Evaluation by Expert Review Panel in the Orange County Head Start classroom.
- 9. After evaluation, make any necessary adjustments for publication.

## Results













Walter FOIL classroom

Teacher/Parent Evaluation

Please use the Likert scale to indicate a response for questions 1-3

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
ne book te	aches basic r	utrition con	cepts	
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
would buy	this book			
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	2	3	4	(5)

nes, colors and wording 5. How would you improve this book?

not sare



NEXT, THE BROKEN DOWN FOOD GOES THROUGH LONG TUBES IN OUR TUMMY CALLED INTESTINES





Teacher/Parent Evaluation

Please use the Likert scale to indicate a response for questions 1-1. Children seem intrigued by the book

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
The book te	aches basic r	nutrition con	cepts	
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
I would buy	this book			A
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. What was something you liked about this book? (1) stration 5. How would you improve this book? Bigger Size







Based on the literature and market review, this book is innovative and the first of it's kind. It incorporates texture to introduce and teach children about the basic concepts of digestion. This can help children learn where their food goes after they eat and the importance of nutrients.

During the Expert Review, this book received positive feedback from both teachers and children. While this book may or may not influence dietary patterns, it can entertain children and potentially get them thinking about the relationship between food and their body.

**Limitations:** Limited finances, lack of creative knowledge, lack of knowledge on book creation, fragile, potentially hazardous pieces, limited evaluation.

Please contact *denaya.elkins-torres01@csulb.edu*. More information on this and related projects can be obtained at <u>www.csulb.edu</u>. PDF of this poster can be found at: https://www.icloud.com/iclouddrive/028IxTHnPs4qNu\_B YYPjHnBQQ#Denaya\_E.\_Project\_Poster





#### Discussion

**Recommendations:** Addressing each of the limitations above could greatly improve this book's potential. Others may build on this idea by creating similar books for other age groups or creating books for children with disabilities/disorders (ex. Type 1 diabetic children).

#### Conclusion

With increasing interest in nutrition education, this book (once published) can be implemented in classrooms, daycare centers, and individual households. Teaching children about nutrition, their body, and digestion teaches children that food is important and serves a purpose. Once they learn this and with more exposure, they may be open to trying more foods including fruits and vegetables.

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#### For more information