

# The Immersive Virtual Environment Testing Area

**Susan Persky PhD**

Associate Investigator

Social and Behavioral Research Branch

National Human Genome Research Institute

National Institutes of Health



 Families  
**SHARE**  
Community  
Translation

Clinical  
Translation

Health  
Disparities

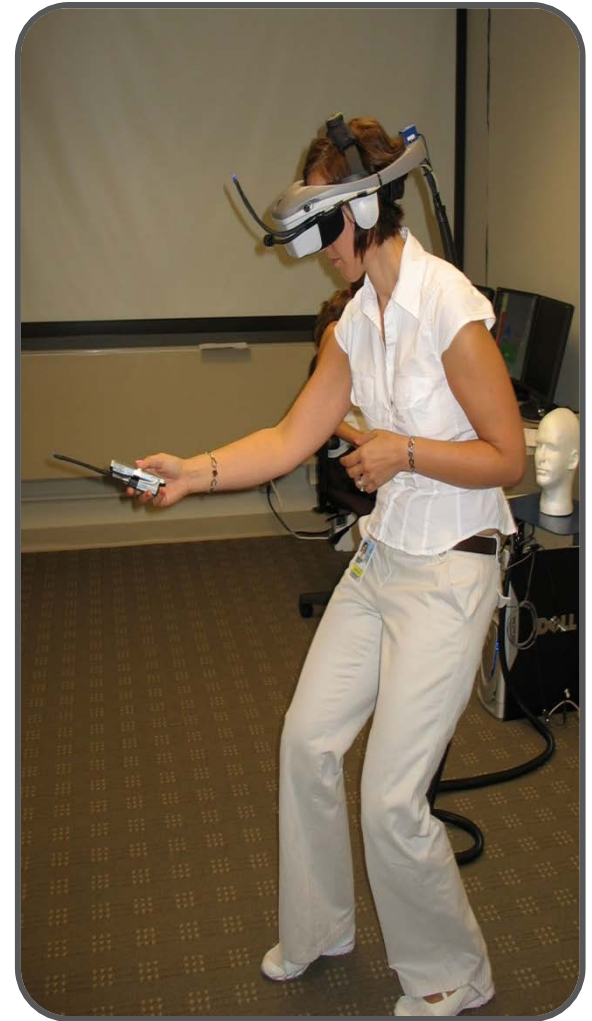
Big Data

# Immersive Virtual Environment Testing Area



# Why Use VR For Research (and Practice)?

- Reduces usual tradeoff between control and realism
- Allows simulation of complex or impossible scenarios
- Enhanced behavioral measurement opportunities
- Portable, distributable



# Example: Healthcare Communication Research



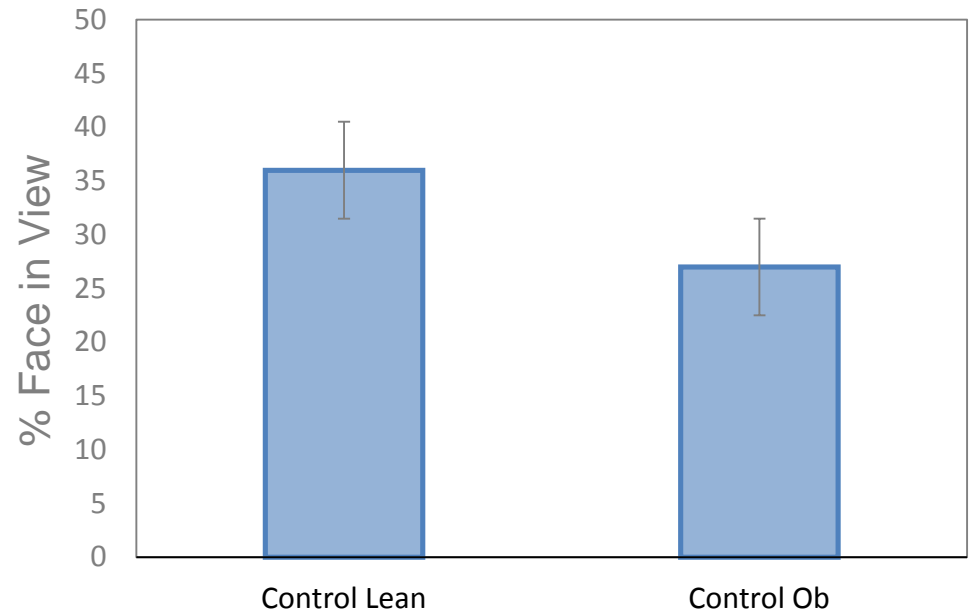
How does a patient's weight influence physician trainees' treatment of that patient and decisions made for her care?

- Two versions of Jennifer Taylor
  - Identical except for weight status
  - Controlled interaction in a psychologically/visually realistic environment

# Results: Behavioral Measurement



## Visual Contact Behavior

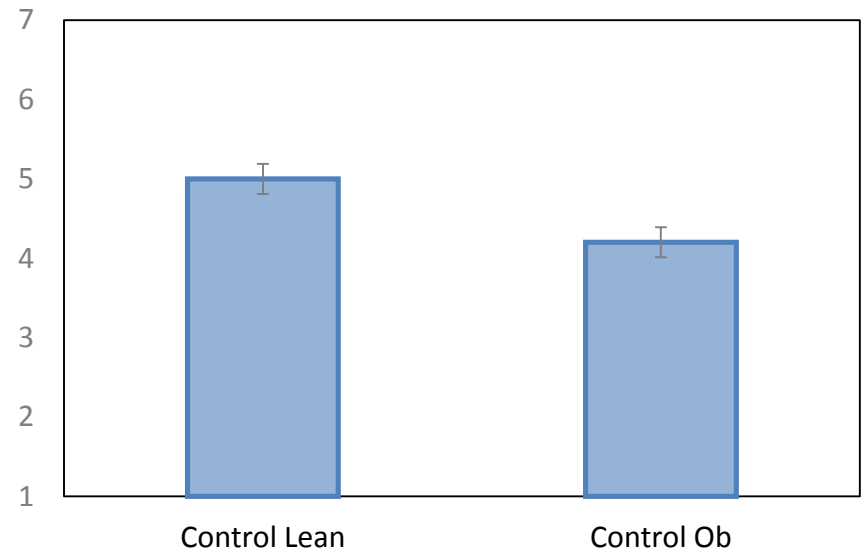




# Results: Attitudes about Patient

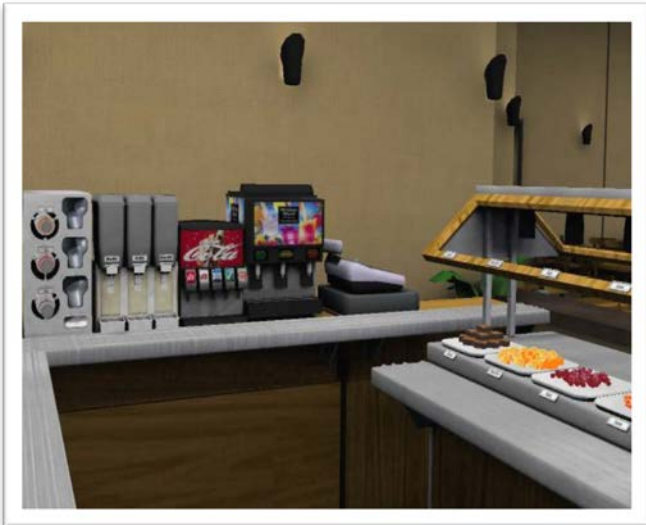


## Anticipated Adherence

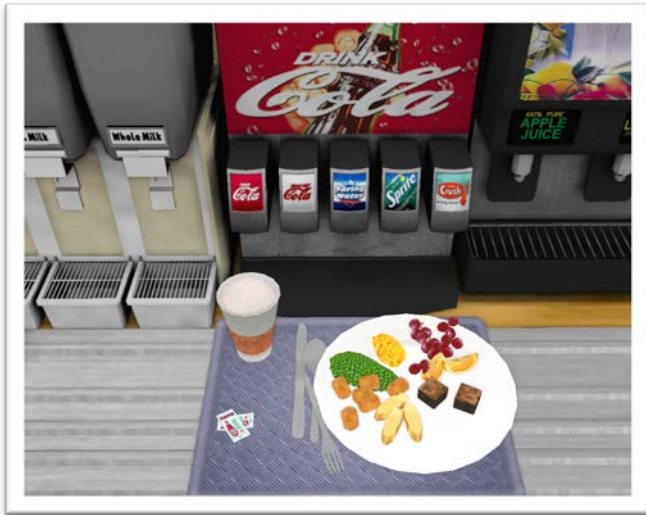


- Results suggest that patient weight status, isolated from all other variables, elicits biased behavior and attitudes from physician-trainees
- Moving beyond research to apply controlled/realistic VR interactions for training evaluation (ex: pharmacogenetics training among NPs)

# Example: Health Behavior Research



How does family history-based obesity risk info for child influence parent feeding behavior?



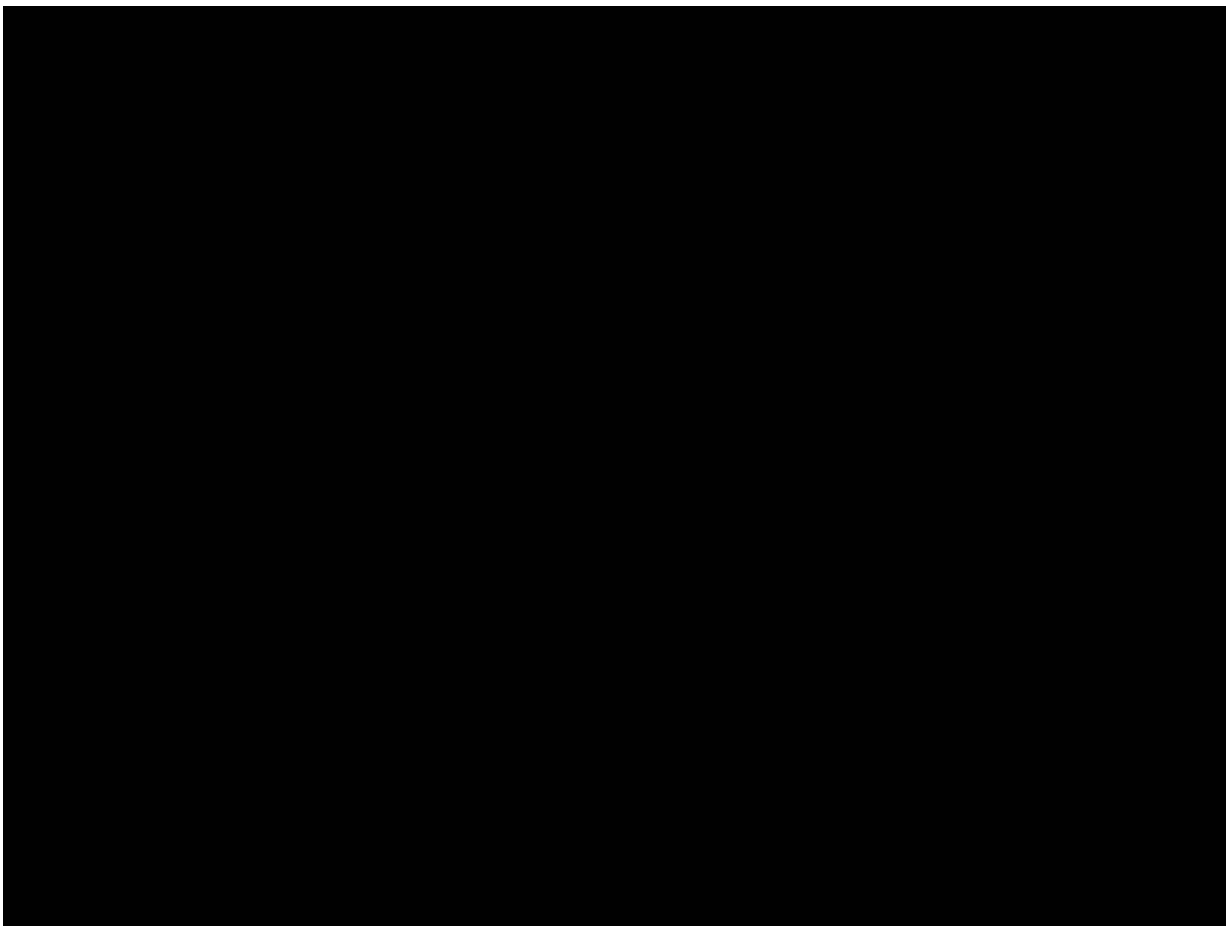
- Does this risk information cause parental guilt?
  - Can guilt be reduced through child feeding behavior?

# The VR Buffet

- Controlled yet psychologically-realistic research setting
- Expanded behavioral measurement opportunities



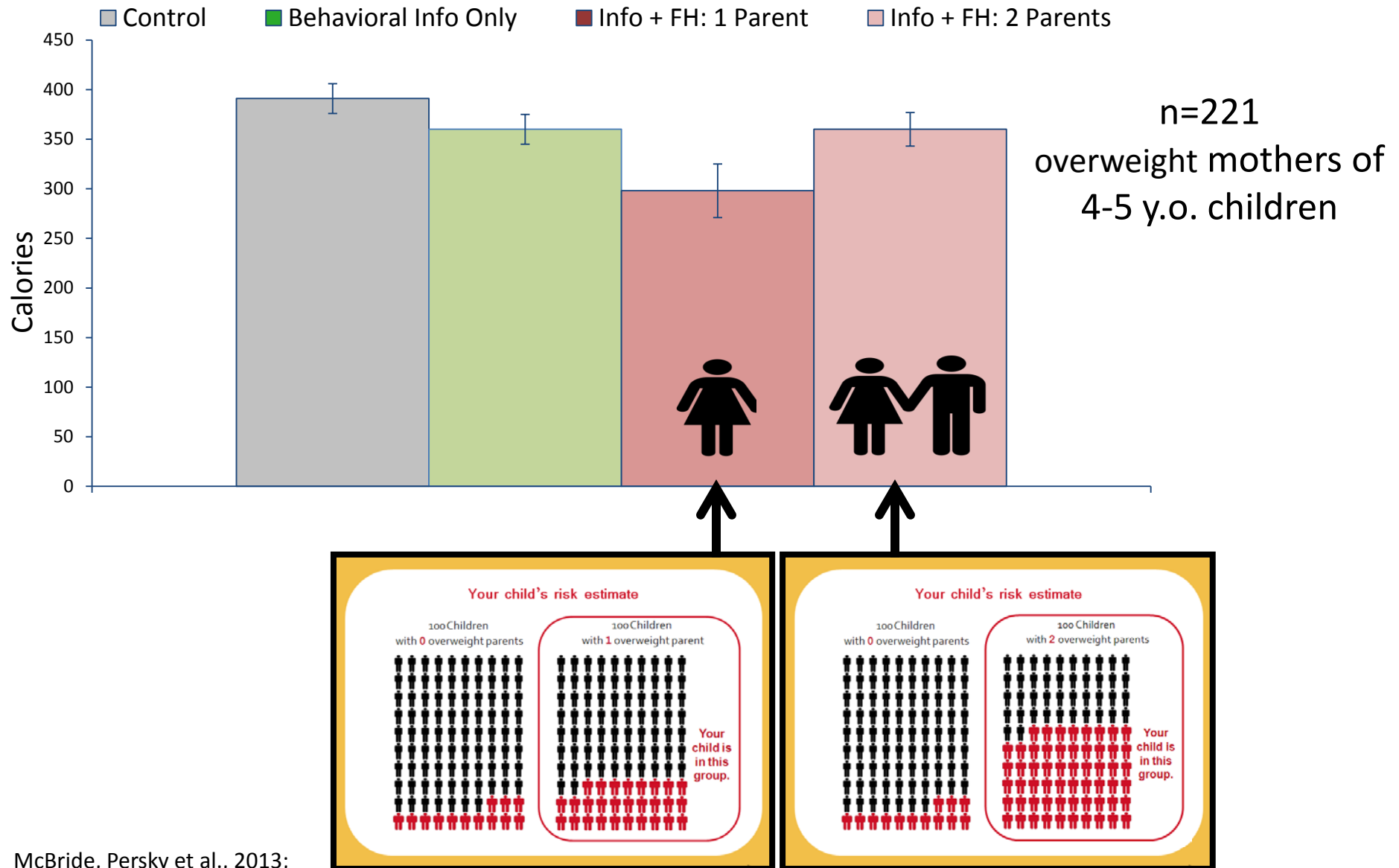




# Validation

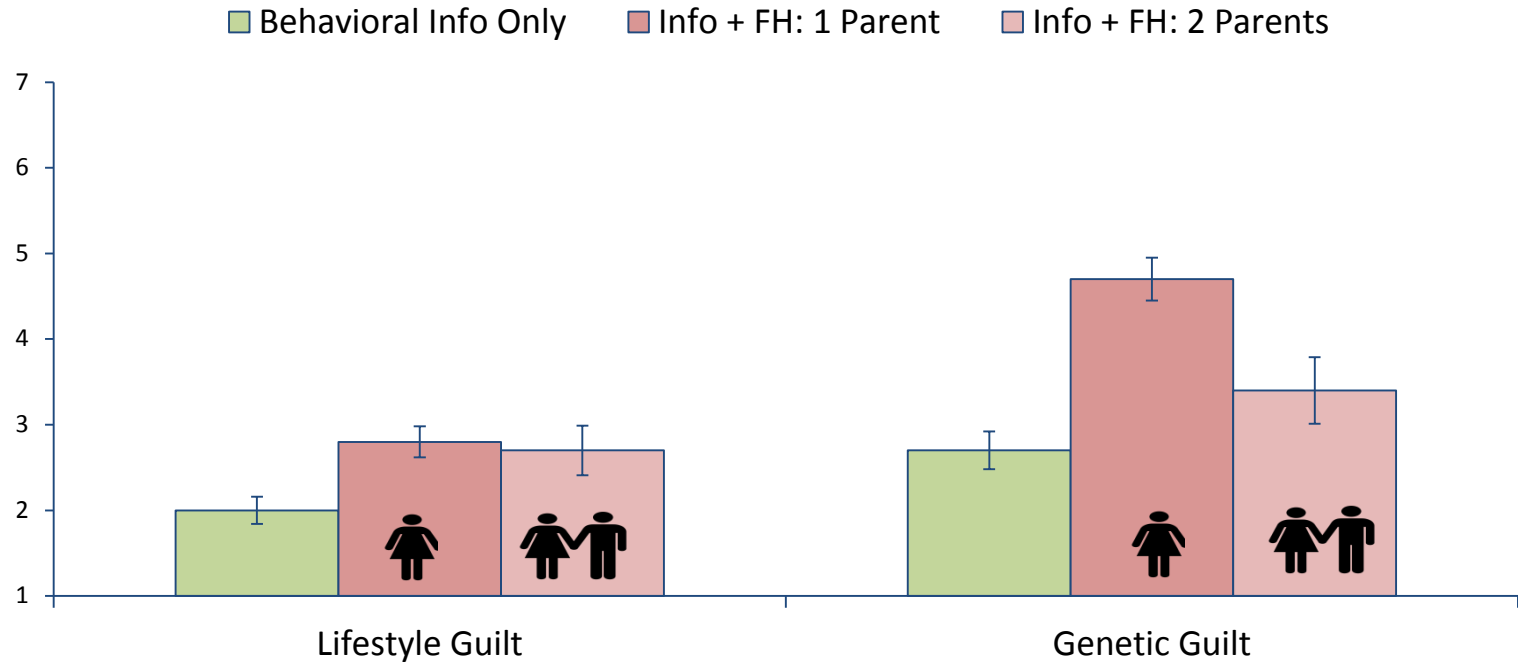


# Feeding Behavior in the VR Buffet



# Mothers' Guilt

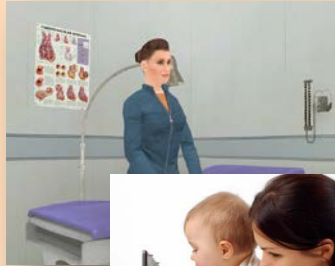
## Guilt experiences



**Making healthier food choices was associated with lower levels of *both types* of guilt.**

# Summary

## Research



- Determine influence of key factors in shaping response to health messages
- In a setting with experimental control, but also psychological realism associated with practice settings and an expanded array of behavioral measures

## Training and Practice



- Generate strategies to communicate and apply health information in practice settings
- Generate VR tools to transition to practice settings



# Acknowledgements

## Project 1

### Healthcare Communication



Collette Eccleston- Syracuse University  
Greg Feero – NHGRI  
Lori Bastian – Duke  
Vence Bonham – NHGRI  
Patricia Brennan – Samuel Merritt University

## Project 2

### Health Behavior



Colleen McBride – Emory University  
Myles Faith – University of North Carolina  
Diane Ward - University of North Carolina  
Laura Wagner – NHGRI  
Sofia Bouhlal – NIAAA/NIDA  
William Kistler – NHGRI  
Megan Goldring – NHGRI  
Rachel Cohen – NHGRI