PROMOTING A CULTURE OF HEALTH IN BALTIMORE'S FAMILY CHILD CARE HOMES

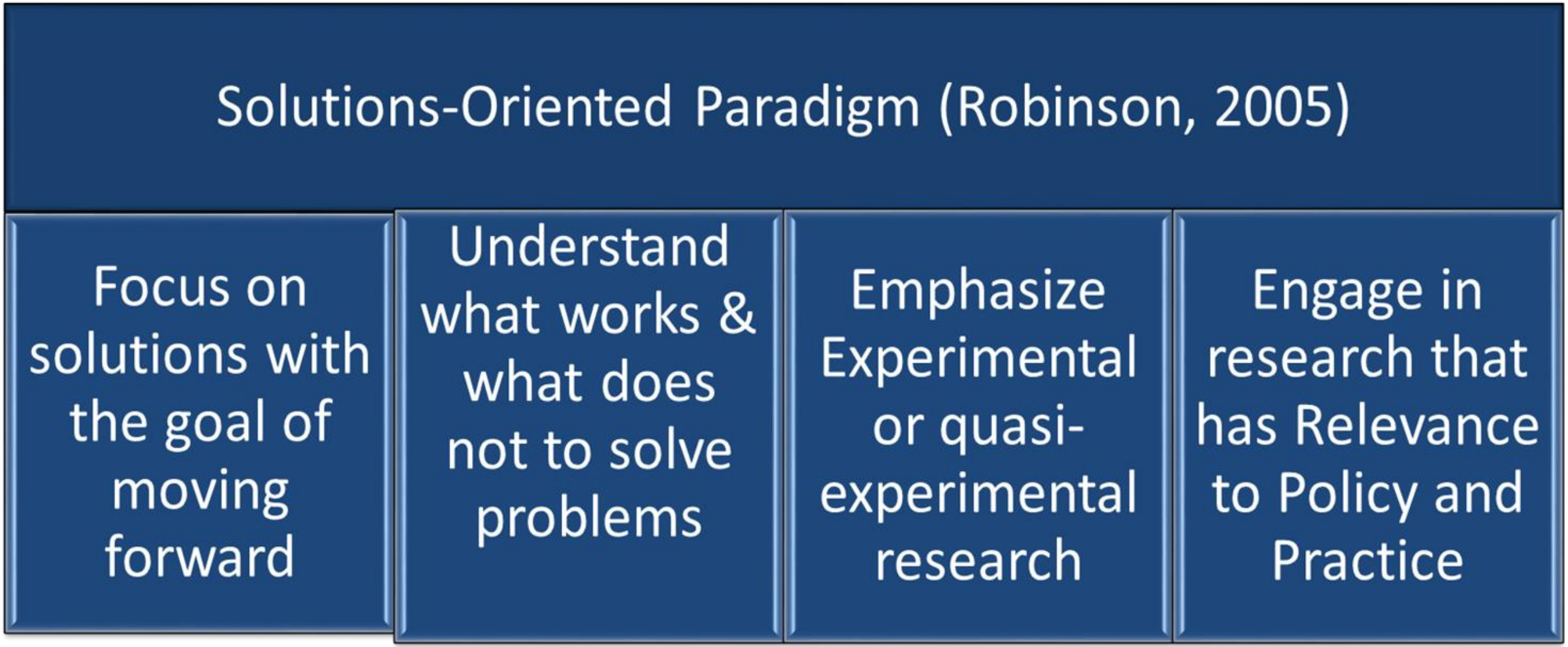
LUCINE FRANCIS, PHD, RN
MORTON K. AND JANE BLAUSTEIN POSTDOCTORAL FELLOW
JOHNS HOPKINS UNIVERSITY SCHOOL OF NURSING

MAY 20TH, 2019

OBJECTIVES

- Research Paradigm
- Discuss program of research – Promoting a culture of health in Baltimore's Family Child Care Homes
- Highlight Next Steps in Research

RESEARCH PARADIGM



FAMILY CHILD CARE HOMES

- Child care setting in a home environment outside a child's home
- Serves 1.9 million children under 5 in US
- Suboptimal environment for Nutrition and Physical Activity (PA)

LITERATURE REVIEW

- Lack of state-level policies
- Limited Provider Training
- High TV Use
- Suboptimal Play Equipment
- Poor Water Availability
- Infrequent Family-Style Meals
- Poor Quality of Foods
- Parenting Challenges

Hindawi
Journal of Obesity
Volume 2018, Article ID 3490651, 20 pages
https://doi.org/10.1155/2018/3490651

Review Article

Examining the Obesogenic Attributes of the Family Child Care Home Environment: A Literature Review

Lucine Francis,[1] Lara Shodeinde,[1] Maureen M. Black,[2,3] and Jerilyn Allen[1,4,5]

CHILD AND ADULT CARE FOOD PROGRAM (CACFP)

- 30% of children enrolled in CACFP funded childcare are cared for by FCCHs
- Few studies exist that examine the impact of CACFP on nutrition environment of FCCHs
- Results from existing studies are mixed
- Currently no program exist within CACFP to address Physical Activity and Screen time

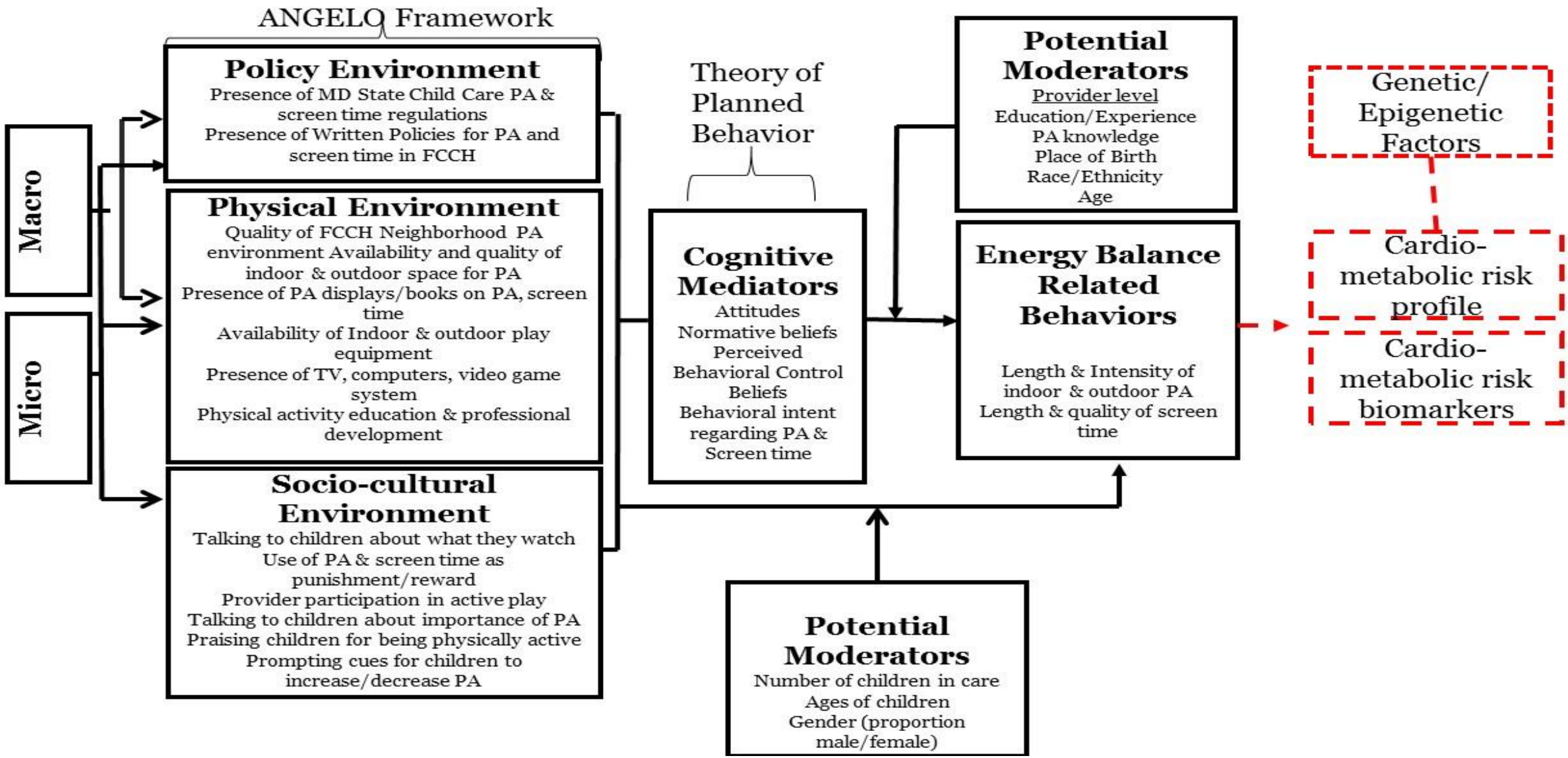
IDENTIFIED GAPS

- Need **Conceptually/Theoretically sound studies** in this area of research
- Little is known about urban FCCH environment.
- More research on environmental and **caregivers** influence on childhood obesity
- Need to assess food environment outside of FCCHs
- Need better understanding on impact of **CACFP** subsidy

PURPOSE OF RESEARCH

The purpose of this research is to describe the Nutrition, PA and screen time environment of Baltimore's FCCHs and to explore the FCCH providers' attitudes, beliefs, challenges & barriers regarding Nutrition, PA and screen time environment and practices.

ANGELO FRAMEWORK



SPECIFIC AIMS

In Baltimore's FCCHs, the specific aims are to:

1. Describe the Nutrition, PA, and Screen time Environment and Practices
2. Compare the Nutrition, PA, and Screen time Environment and Practices in non-CACFP and CACFP Participating FCCHs
3. Explore FCCH Providers' Attitudes, Beliefs, and Intent Related to the Nutrition, PA, and Screen Time Environment.
4. Identify areas of need & Develop Pragmatic and Acceptable Interventions

STUDY 1 (NUTRITION SURVEY)

NIH (F31) Ruth L. Kirschstein National Research Service Award
NIH (T32) Interdisciplinary Research in Cardiovascular Health Trainee

METHODOLOGY

Design: descriptive, cross-sectional survey

Target Population: Family Child Care Providers in Baltimore City

Sampling: Proportionate stratified random sampling

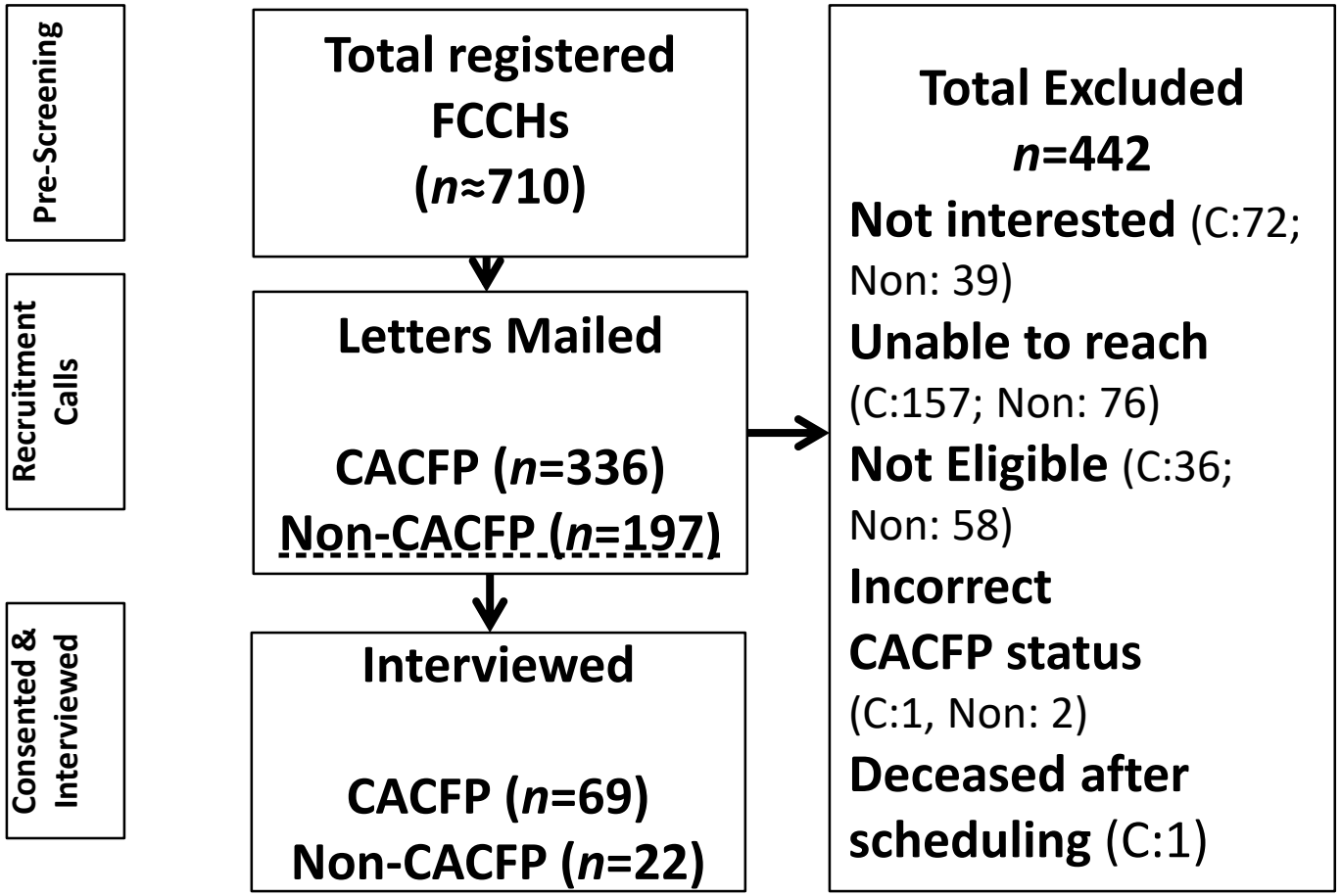
Sample Size: 92 (69 CACFP FCCHs, 23 non CACFP FCCHs)- *Effect size 0.1, Power 0.85*

INCLUSION & EXCLUSION CRITERIA

- ✓ Must be a licensed family child care provider
- ✓ Must have at least one child aged 2-5 in full-time or half-time care
- ✓ FCCH must be operated in Baltimore City
- ✓ Must be able to speak & read English

- ⃠ Family childcare providers who do not provide lunch and snacks to children in care (~4%)

RECRUITMENT EFFORTS



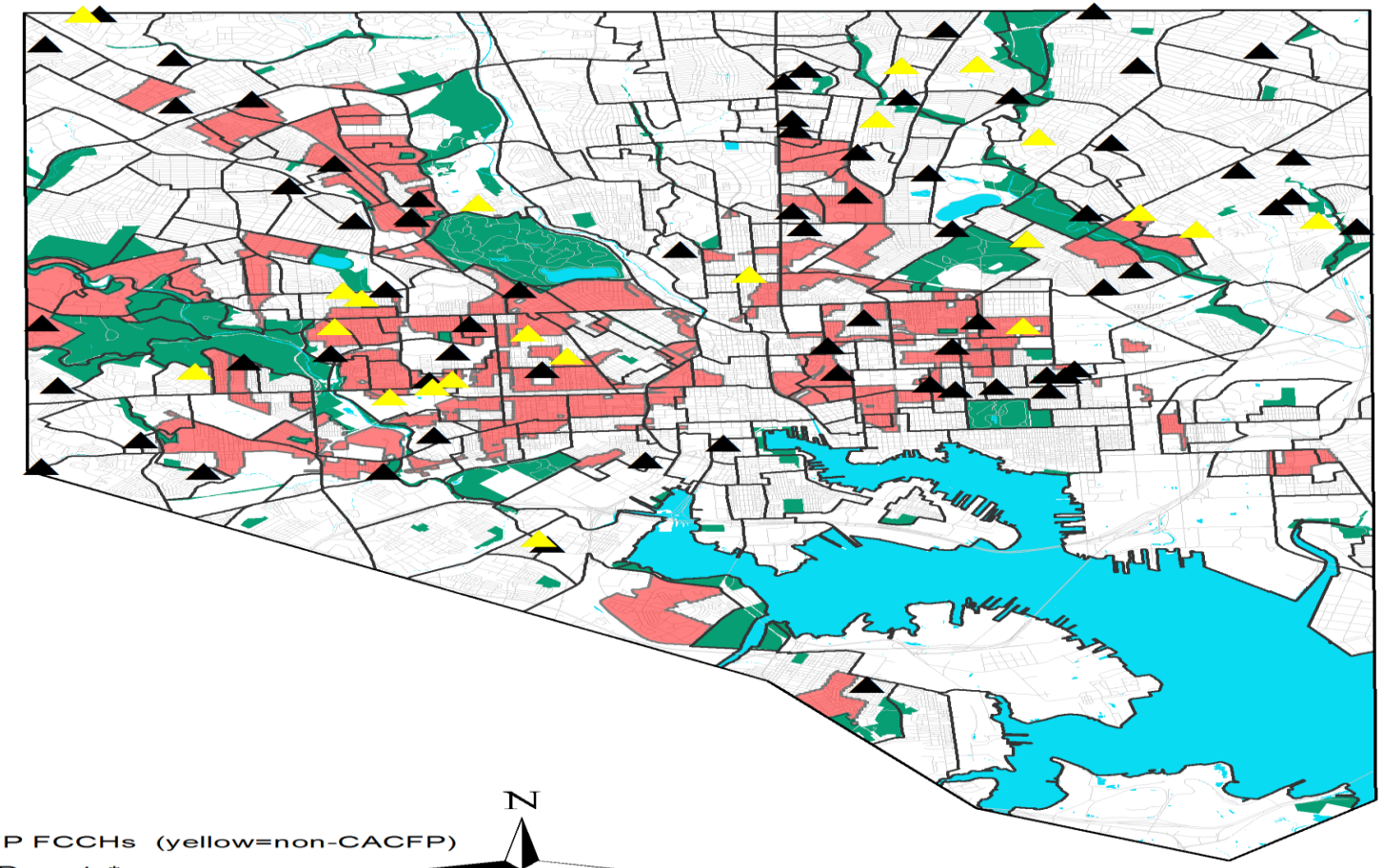
DEMOGRAPHICS BY CACFP STATUS

Characteristic	Total (N=91)	CACFP (n=69)	Non-CACFP (n=22)	p-value
	N (%) or Mean ±SD			
Black or African-American	82 (90.1%)	63 (91.3%)	19 (86.4%)	0.50
Years of Experience	18±9.5	18.6±8.82	16.1±11.2	0.35
Body Mass Index (BMI) kg/m²	30	29.4	31	0.31
Educational status				
<High school	1(1.1)	1(1.5)	0	
High school or GED	32(35.2)	26(37.7)	6(27.3)	0.37
Some College	41(45.1)	31(44.9)	10(45.5)	0.97
≥College	16(17.6)	10(14.5)	6(27.3)	0.17
***Nutrition Education within past year**	71(78)	60(87)	11(50)	**0.0003**

***status of nutrition training within the past year was associated with the CACFP participation status of the FCCH ($\chi^2(1) = 13.3$, p=0.000**

% OF FCCHS IN A FOOD DESERT BY CACFP STATUS

		Total	CACFP n=69	Non-CACFP n=22	p-value
		n(%)			
Food desert status [Yes]		19(21)	13(68)	6(32)	0.003
	Distance to supermarket	80(88)	59(86)	21(96)	0.22
	HFAI score	48(70)	48(70)	19(86)	0.16
	Vehicle Availability	32(46)	32(46)	9(41)	0.77
	Poverty Level	50(55)	37(54)	13(59)	0.73



* A Food Desert is an area where: 1) The distance to a supermarket or supermarket alternative is more than 1/4 mile, 2) The median household income is at or below 185% of the Federal Poverty Level, 3) Over 30% of households have no vehicle available, and 4) The average Healthy Food Availability Index score for all food stores is low.

PREVALENCE OF ENVIRONMENT & PRACTICES EXCEEDING OR FAR EXCEEDING CHILD CARE STANDARDS

Fewer than 50% of FCCHs

- **served meals family style most or all the time and**
- **reasoned with their child to eat healthy foods.**
- **Repeat menu cycle every 3 weeks or longer**
- **Engaged Parents in Nutrition Education**

More CACFP than non-CACFP FCCHs exceeded child care standards with some exceptions.

Compared to CACFP homes, more non-CACFP

- **rarely ate or drank unhealthy foods in front of the children,**
- **rarely required children to finish everything on their plate,**
- **served quality fruit every time fruit was served,**
- **infrequently served fried or pre-fried meats, and**
- **served mostly 1% or skim milk.**

Environment and Practices in FCCH Mean Score by CACFP Status

	Total	CACFP n=69	Non-CACFP n=22	p-value
	Mean ± SD			
Micro Physical Food Environment	3.37 ± 0.35	3.40 ± 0.34	3.27 ± 0.37	0.17
Mealtime Environment	3.15 ± 0.35	3.19 ± 0.32	3.02 ± 0.42	0.08
Quality of Foods Offered (Practices)	3.16 ± 0.33	3.19 ± 0.31	3.08 ± 0.38	0.24

Environment and Practices in FCCH Mean Score by Nutrition Training Status

	Total	Nutrition Training (yes) n=71	Nutrition Training (no) n=20	p-value
	Mean ± SD			
Physical Food Environment	3.37 ± 0.35	3.42 ± 0.33	3.17 ± 0.37	0.01
Mealtime Environment	3.15 ± 0.35	3.16 ± 0.37	3.10 ± 0.30	0.46
Quality of Foods Offered (Practices)	3.16 ± 0.33	3.18 ± 0.32	3.08 ± 0.36	0.27

Summary of Regression Analyses for Variables Predicting the Micro Physical and Mealtime Environment Mean Score *(M)* (N=91)

	Micro Physical Food Environment	Mealtime Environment	Quality of Foods Offered
CACFP status (Yes/No)	-	+	-
Nutrition Training Status (Yes/No)	+	-	-

Summary of Regression Analyses for Variables Predicting the Quality of Foods Offered Mean Score *(M)* (N=91)

	Quality of Foods Offered
Food Desert Status	-
Physical Food Environment	-
Mealtime Environment	+

SUMMARY OF STUDY I RESULTS

CACFP

- More CACFP providers report having nutrition training within past year & higher mealtime environment mean score
- CACFP participation status of FCCHs was not associated with the quality of foods offered.

Physical Food Environment

- Providers with nutrition training within past year had higher physical food environment mean score
- No significant associations were found between the micro and macro physical food environment and the quality of foods offered to 2-5-year-old children.

Mealtime environment

- The mealtime environment was positively associated with the quality of foods offered to children

Limitations

- Cross-sectional study
- Social desirability bias

Strengths

- Community-engaged research
- Addresses an understudied population within child care and incorporated the concept of food deserts
- Innovative Framework to guide study aims and adaptation of tool
- Content Validity of Instrument
- Important policy implications regarding the CACFP

STUDY 2

MIXED METHODS EXAMINATION OF PHYSICAL ACTIVITY AND SCREEN TIME IN URBAN FCCHS

Hopkins Center for Health Disparities Solutions Pilot Project Award/U54MD000214 National Institutes of Health/ NIMHD

METHODS

- Convenience sample of **30 CACFP FCCHs**
- **Systematic Observations** (2 days)
  - The Environment and Policy Assessment and Observation Protocol (FCCH edition)
  - The Active Neighborhood Checklist
- **Individual Semi-Structured Interviews**

Advisory Board

IMPLICATIONS: RESEARCH, POLICY & NURSING

- **Research**
  - Opportunities to partner with the CACFP and child care licensing agencies to improve nutrition, PA, and screen time environment through intervention work

- **Policy**
  - CACFP should consider expanding their program to optimize mealtime environments and ensure non CACFP providers are provided with adequate nutrition training

- **Nursing**
  - Nursing Education
  - Nursing Praxis in Child Health
  - Nursing Advocacy

FUTURE WORK

1. Build on the Baltimore survey of FCCHs and a pilot evaluation of a provider and parent-centered wellness intervention
2. Develop a multi-state RCT to examine the effects of a well-developed provider and parent-centered environmental wellness intervention on child health outcomes
3. Include issues of Trauma, Community ACES, & Resilience in research
4. Use research in FCCHs settings as an entry way to engage and work with parents of young children

ACKNOWLEDGEMENTS

Faculty Advisors
- Dr. Jerilyn Allen
- Dr. Deborah Gross
- Dr. Maureen Black

Research Program Assistants
- Lara Shodeinde, BSN, RN
- Moroya Lawal, BS student in Psychology and Brain Sciences/Pre-Med
- Keyona Hough

National Institute of Health/National Institute of Nursing Research
- Ruth L. Kirschstein National Research Service Award for Individual Pre-doctoral Fellows in Nursing Research 1F31NR015399
- Interdisciplinary Training in Cardiovascular Health Research 5T32NR012704

Morton K. and Jane Blaustein Foundation

National Institute of Health/National Institute of Minority Health and Health Disparities
Hopkins Center of Health Disparities Solutions Pilot Grant U54MD000214