

# ASSESSING ACCESS TO HEALTHY FOOD

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# ABOUT ME

- Stephanie Boylan
- Master of Public Health student
  - Maternal & Child Health
- University of Minnesota

## BACKGROUND

Along with being designated a Racially Concentrated Area of Poverty (RCAP), two census tracts along the Zane Avenue Corridor are also identified as food deserts by the USDA, making it critical that the City identify ways to increase access and consumption of healthy food for the long-term health of the community.

# TASKS

- PUBH 7696: Field Experience, Maternal & Child Health

**Goal:**

- Gather information about the knowledge, beliefs, practices, and barriers to nutrition and healthy activity in the community, with a focus on the child population and families with children

**Description:**

- Work within city Brooklyn Park Racially Concentrated Area of Poverty to determine the disparities in a specified population (children and families with children)
- Review existing local data sources
- Use knowledge and philosophies learned in the classroom (such as class “Maternal and Child Health Leadership”) to develop project improvement and presentation as well as connect classroom learning to field experience
- Conduct a literature review to determine if interventions have been done in similar areas
- Final report that includes a program description, logic model, proposed evaluation plan, and data collection instrument

# DATA

Age	Population	Proportion
0-17	8521	29.94%
18-24	3091	10.86%
25-45	9035	31.75%
46-64	5391	18.94%
65+	2420	8.50%
<b>Total</b>	<b>28458</b>	<b>100.00%</b>

# DATA

Household Income	# of households	Proportion
less than \$15,000	1,475	14.57%
\$15,000 - \$24,999	1,198	11.83%
\$25,000 - \$34,999	1,427	14.09%
\$35,000 - \$49,999	1,654	16.33%
\$50,000 - \$74,999	1,981	19.56%
\$75,000 - \$99,999	1,139	11.25%
\$100,000 - \$149,999	974	9.62%
\$150,000 - \$199,999	173	1.71%
\$200,000 or greater	105	1.04%
<b>Total</b>	<b>10,126</b>	<b>100.00%</b>

# DATA

Race	Population			Percent		Proportion by race
	Male	Female	Total	Male	Female	
White	595	637	1,232	48.30%	51.70%	14.40%
Black/African American	1,706	1,729	3,435	49.67%	50.33%	40.15%
American Indian/Alaska Native	23	20	43	53.49%	46.51%	0.50%
Asian	662	591	1,253	52.83%	47.17%	14.65%
Hispanic	643	608	1,251	51.40%	48.60%	14.62%
Pacific Islander	1	2	3	33.33%	66.67%	0.04%
Other	394	305	699	56.37%	43.63%	8.17%
Multiple	334	305	639	52.27%	47.73%	7.47%
Total	4,358	4,197	8,555	50.94%	49.06%	100.00%

## DATA

	Minnesota			Brooklyn Park		
	2012	2015	% change	2012	2015	% change
<b>Overweight and Obese (<math>\geq 85^{\text{th}}</math> percentile)</b>	28.70%	27.90%	-2.79%	24.50%	28.40%	15.92%
<b>Obese (<math>\geq 95^{\text{th}}</math> percentile)</b>	12.70%	12.20%	-4.10%	10.70%	11.90%	11.21%

# DATA

Census Tract	1/2 Mile		1 Mile		10 Miles		20 Miles	
27053026807	1158.51	22.12%	723.14	13.81%	0	0	0	0
27053026809	1782.00	35.36%	1021.19	20.27%	0	0	0	0
27053026810	976.44	16.01%	40.22	0.66%	0	0	0	0
27053026811	1730.00	30.61%	1048.87	18.56%	0	0	0	0
27053026816	1291.49	20.63%	82.58	1.32%	0	0	0	0
27053026818	411.92	9.02%	0.92	0.02%	0	0	0	0
27053026819	517.76	11.51%	4.60	0.10%	0	0	0	0
Grand Total	7868.11	145.27%	2921.52	54.73%	0	0	0	0

Census Tract	1/2 Mile		1 Mile		10 Miles		20 Miles	
27053026807	421.70	20.24%	249.26	11.97%	0	0	0	0
27053026809	389.23	23.07%	213.12	12.63%	0	0	0	0
27053026810	243.94	10.99%	15.58	0.70%	0	0	0	0
27053026811	254.39	14.41%	151.33	8.57%	0	0	0	0
27053026816	155.94	7.21%	11.14	0.52%	0	0	0	0
27053026818	85.15	5.33%	0.15	0.01%	0	0	0	0
27053026819	326.60	16.68%	3.58	0.18%	0	0	0	0
Grand Total	1876.96	97.93%	644.16	34.58%	0	0	0	0

# DATA

Census Tract	Low Income	Poverty Rate	Median Family Income
27053026807	Yes	13.1	\$ 60,000.00
27053026809	Yes	25.2	\$ 31,698.00
27053026810	Yes	24	\$ 48,076.00
27053026811	No	13.8	\$ 72,500.00
27053026816	No	13.1	\$ 78,000.00
27053026818	Yes	18.1	\$ 56,089.00
27053026819	Yes	36.6	\$ 35,435.00

County	District Name	School Name	Enr	Free	Red	Free & Red Lunch
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	BASSWOOD ELEMENTARY	1003	102	23	12.46
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	CEDAR ISLAND ELEMENTARY	447	99	31	29.08
Anoka	ANOKA-HENNEPIN PUBLIC SCHOOL DIST.	CHAMPLIN/BROOKLYN PK ACD MATH ENSC	881	220	81	34.16
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	CREST VIEW ELEMENTARY	261	201	29	88.12
Anoka	ANOKA-HENNEPIN PUBLIC SCHOOL DIST.	DAYTON ELEMENTARY	469	110	33	30.49
Hennepin	BROOKLYN CENTER SCHOOL DISTRICT	EARLE BROWN ELEMENTARY	1014	665	149	80.27
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	EDINBROOK ELEMENTARY	682	343	95	64.22
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	ELM CREEK ELEMENTARY	507	140	42	35.89
Anoka	ANOKA-HENNEPIN PUBLIC SCHOOL DIST.	EVERGREEN PARK ELEMENTARY	443	287	72	81.03
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	FAIR OAKS ELEMENTARY	406	309	59	90.64
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	FERNBROOK ELEMENTARY	803	111	37	18.43
Hennepin	ROBBINSDALE PUBLIC SCHOOL DISTRICT	FOREST ELEMENTARY	565	289	53	60.53
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	GARDEN CITY ELEMENTARY	305	215	41	83.93
Hennepin	ROBBINSDALE PUBLIC SCHOOL DISTRICT	LAKEVIEW ELEMENTARY	444	275	32	69.14
Hennepin	ROBBINSDALE PUBLIC SCHOOL DISTRICT	MEADOW LAKE ELEMENTARY	606	422	62	79.86
Anoka	ANOKA-HENNEPIN PUBLIC SCHOOL DIST.	MONROE ELEMENTARY	664	247	87	50.30
Hennepin	ROBBINSDALE PUBLIC SCHOOL DISTRICT	NORTHPORT ELEMENTARY	596	435	68	84.39
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	OAK VIEW ELEMENTARY	472	192	36	48.30
Anoka	ANOKA-HENNEPIN PUBLIC SCHOOL DIST.	OXBOW CREEK ELEMENTARY	1211	174	112	23.61
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	PALMER LAKE ELEMENTARY	463	287	77	78.61
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	PARK BROOK ELEMENTARY	267	186	35	82.77
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	RICE LAKE ELEMENTARY	657	183	48	35.15
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	RUSH CREEK ELEMENTARY	878	67	22	10.13
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	WOODLAND ELEMENTARY	709	163	55	30.74
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	ZANEWOOD COMMUNITY SCHOOL	377	287	40	86.73
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	Brooklyn Middle STEAM School	915	471	122	64.80
Anoka	ANOKA-HENNEPIN PUBLIC SCHOOL DIST.	JACKSON MIDDLE	2118	542	209	35.45
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	Maple Grove Middle School	1690	303	98	23.72
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	North View Middle School IB World	699	484	109	84.83
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	Osseo Middle School	996	255	99	35.54
Hennepin	ROBBINSDALE PUBLIC SCHOOL DISTRICT	ROBBINSDALE MIDDLE	1238	747	135	71.24
Hennepin	BROOKLYN CENTER SCHOOL DISTRICT	BROOKLYN CENTER SECONDARY	918	608	147	82.24
Anoka	ANOKA-HENNEPIN PUBLIC SCHOOL DIST.	CHAMPLIN PARK HIGH SCHOOL	2801	692	275	34.52
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	MAPLE GROVE SENIOR HIGH	2295	234	80	13.68
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	OSSEO SENIOR HIGH	2022	795	212	49.80
Hennepin	OSSEO PUBLIC SCHOOL DISTRICT	PARK CENTER IB WORLD SCHOOL	2042	1095	258	66.25

# LITERATURE REVIEW

- **Goal:** examine the success of community programs in increasing access to healthy food in suburban areas through school policy, school gardens, grocery store marketing, transportation, and youth engagement techniques

# LITERATURE REVIEW

- **Methods:** I searched the PubMed database with the Mesh terms “food,” “access,” and “Minnesota.” This brought up 183 results
  - After filtering for “free full text,” 74 results showed. From these, papers included were those relevant to children and families. Four were chosen
  - I also searched PubMed with the Mesh terms “food,” “access,” and “intervention.” This brought up 765 results
  - After filtering for “free full text,” 325 results showed. This was narrowed down to 216 by filtering dates to the past five years
  - From these, papers again included those relevant to children and families. Articles that focused on low-income, minority communities were preferential. Eleven were chosen

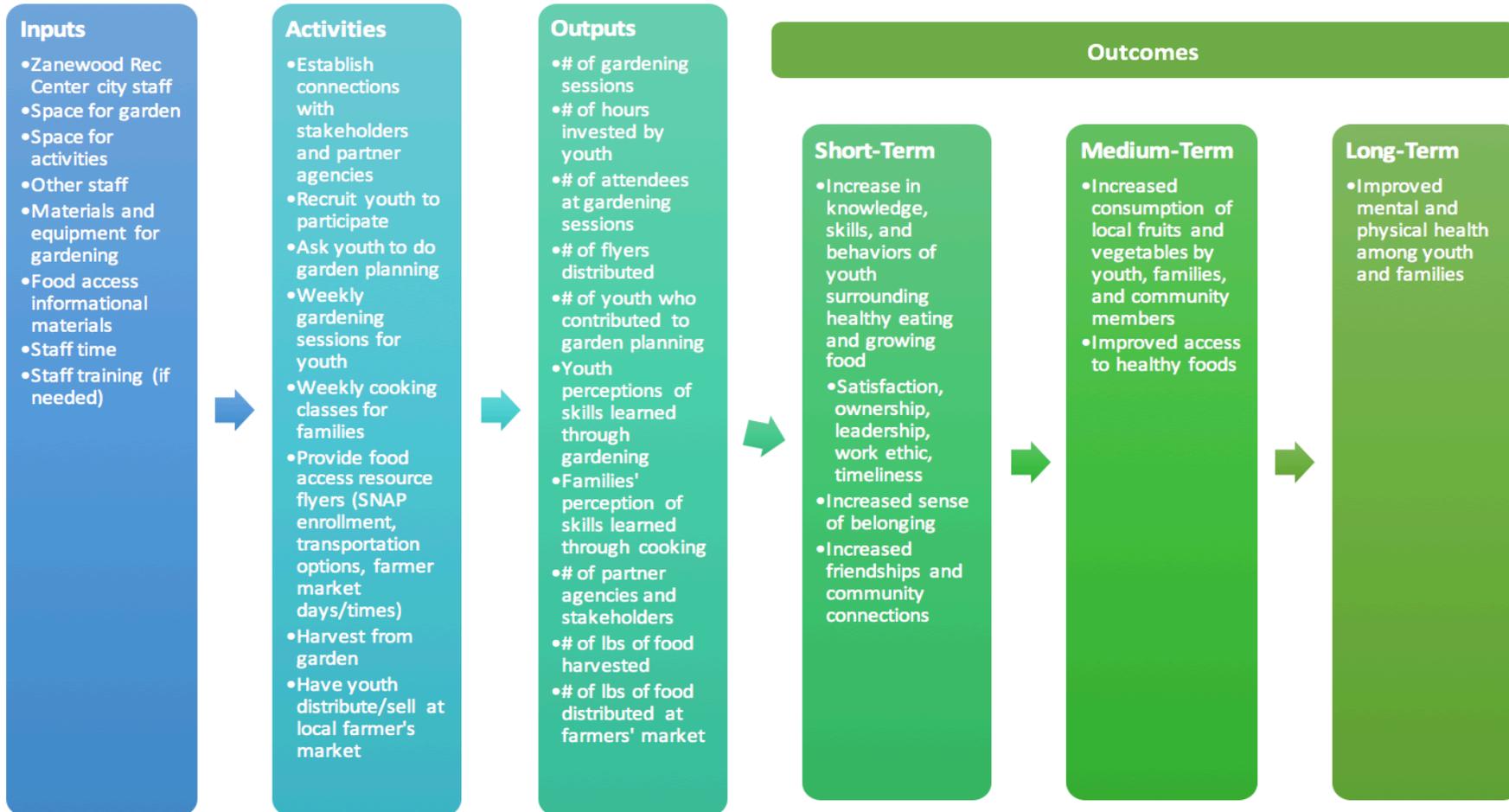
# LITERATURE REVIEW

- **Results:** In all articles reviewed, researchers suggested, in some form, a focus on changing policies, systems, and environments to prevent obesity by promoting healthful eating and active living
- Though interventions varied greatly between policy, environmental, and system changes, themes emerged from this review, three common themes were
  - (1) advertising and marketing
  - (2) youth engagement
  - (3) community and academic partnerships

# LITERATURE REVIEW

- **Conclusion:** The success of an implementation to increase food access depends largely on the location of the issue, social determinants of health, and demographics in that area
- Each community should assess current interventions to determine how they can change and model the intervention to fit their community

## Zanewood Rec Center Community Garden Program



**Program Goal:** Increase access to healthy food in Zane Avenue Corridor for youth and families

# EVALUATION PLAN

Formative Evaluation

- How will you advertise/market?
- What are you advertising/marketing?
- What activities do the youth want?
- What's the most popular time of day for garden activities?
- What activities were already offered? If applicable, why have people not participated?
- Are weekly gardening sessions enough?
- What do families already know about SNAP, transportation, and farmers' markets in the community?
  - What else would they like information about?
- What do families want to know about cooking?

# EVALUATION PLAN

## **Formative Data Sources:**

- Focus group with youth from the community
  - Test food access resource flyers
  - Test a draft calendar of events
  - Address formative questions
- Focus group with parents from the community
  - Test food access resource flyers
  - Test a draft calendar of events
  - Address formative questions

# EVALUATION PLAN

## Process Evaluation

- Garden:
  - Have youth been recruited to participate?
  - Are gardening sessions being done as planned (weekly)?
  - Are youth attending activities?
  - Are youth satisfied with gardening sessions?
  - Have connections been made with partner agencies and stakeholders?
  - Are youth involved in the planning of the garden?
  - Are youth harvesting the produce?
  - Is food being distributed at a local farmers' market?
- Cooking & Resource sessions:
  - Are staff trained?
  - Is there fidelity to cooking class protocol?
  - Are cooking classes being done as planned (weekly)?
  - Are resource flyers being delivered as planned?

# EVALUATION PLAN

## **Process Data Sources:**

- Logbook of attendance at all sessions
- Record/receipts of food distributed at farmers' market
- Survey
  - Self-reported hours
  - Satisfaction
  - Involvement
- Observations of staff conducting classes/sessions

# EVALUATION PLAN

## Outcome Evaluation

### **Outcome Evaluation:**

- Short Term:
- Did the knowledge of healthy food options increase?
- Did the awareness of community garden, cooking classes, and food access information flyers increase?
- Did families' confidence in their ability to cook healthy food increase?
- Did social support for engagement in activities increase?
- Did motivation for healthy eating increase?
- Did youth feel their work ethic (timeliness, leadership, etc.) increased?
- Did families feel their sense of community increased?
- Did families feel their sense of belonging increased?
- Did youth feel their friendships increased?
- Medium Term:
- Did consumption of fruits and vegetables increase?
- Did access to healthy foods increase?
- Long Term
- Did mental health improve?
- Did physical health improve?

# EVALUATION PLAN

## **Outcome Data Sources:**

- Surveys
  - Perception of mental health
  - Perception of physical health
  - Knowledge, confidence, motivation, etc.
  - Cooking skills
  - Social engagement, participation, access to food

# EVALUATION PLAN

Study Design

- Pre/Post
  - Strengths: fairness to stakeholders/residents
  - Weaknesses: less robust than randomized control, self-reported
  - Threats to validity:
    - History: we can't control what happens in the community
    - Experimental mortality: lose residents to follow up (relocation, illness)



# DATA COLLECTION

## Potential Follow-Up Survey Questions for Youth

- How did you hear about the Zanewood Rec Center gardening program?
- How many gardening sessions have you attended?
  - Did you go every week it is offered?
- How satisfied are you with this program? (scale)
- Did you help plan the garden?
- Did you help harvest the produce?
- Did your knowledge of healthy food options increase?
- Did you feel motivated to eat healthier after the program?
- Do you feel your work ethic (timeliness, leadership, etc.) increased?
- Do you feel your friendships increased because of the program?
- Do you consume more fruits and vegetables because of the program?
- Do you have better access to healthy foods because of the program?
- Did your mental health improve because of the program?
  - If yes, how so?
- Did your physical health improve because of the program?
  - If yes, how so?
- What can be improved about this program?

# DATA COLLECTION

## Potential Follow-Up Survey Questions for Families

- How did you hear about the Zanewood Rec Center cooking program?
- How did you receive or find the resources and flyers?
- Did you attend cooking sessions?
  - If so, how many?
  - Did you go every week it was offered?
- How satisfied are you with this program? (scale)
- What can be improved about the cooking classes?
- Did you find the resources and flyers helpful?
- How satisfied are you with the resources and flyers? (scale)
- What can be improved or added to the resources and flyers?
- Did your confidence in your ability to cook healthy food increase?
- Do you feel your sense of community increased because of the program?
- Do you feel your sense of belonging increased because of the program?
- Do you feel motivated to eat healthier after the program?
- Do you consume more fruits and vegetables because of the program?
- Do you have better access to healthy foods because of the program?
- Did your mental health improve because of the program?
  - If yes, how so?
- Did your physical health improve because of the program?
  - If yes, how so?

# THANK YOU

- Questions?
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