Title: Food Pharmacy Implementation to Reduce Cardiovascular Disease through Nutritional Awareness

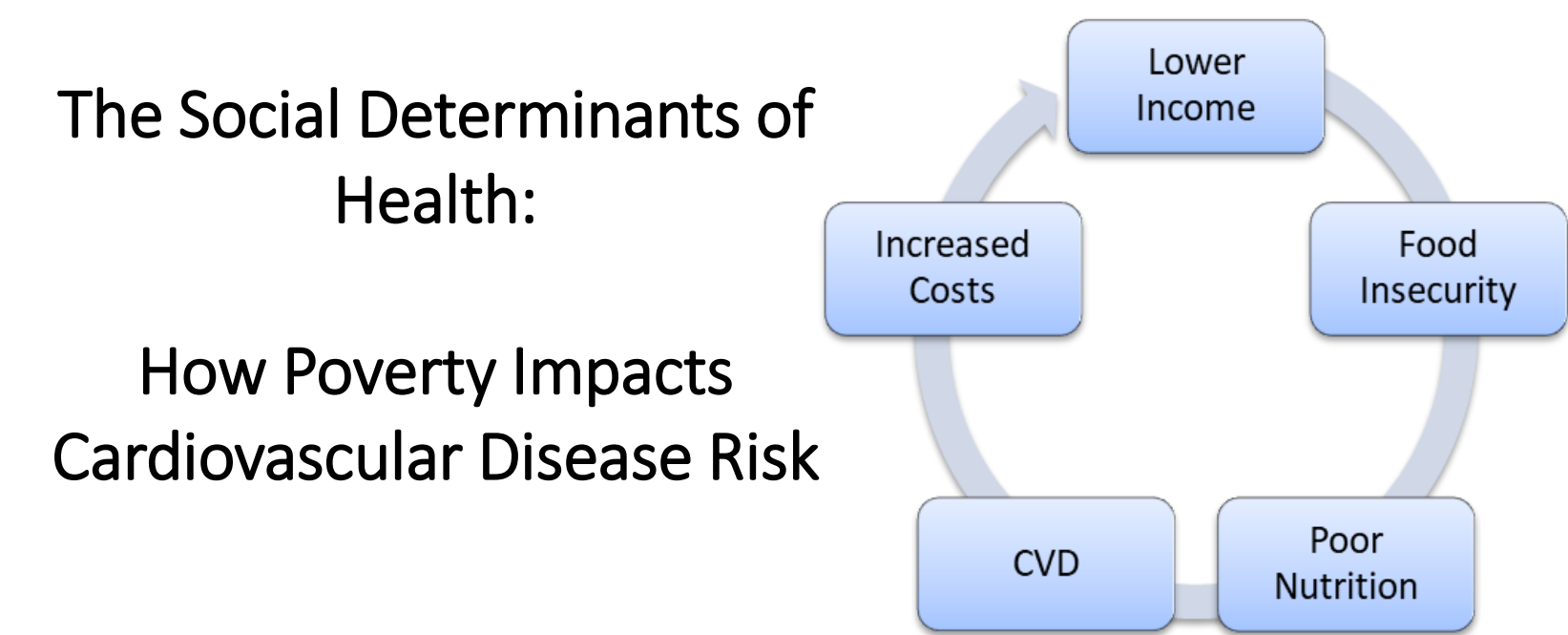Authors: Brooke Lathon, DNP, FNP-BC, Terri L. Yost, PhD, FNP-BC and Beth Quatrara, DNP, APRN, CMSRN, ACNS-BC

UVA SCHOOL *of* NURSING

CVD Background & Significance

- Cardiovascular disease (CVD) is the leading cause of death.
- Risk/outcomes are strongly associated with income:
  - Disproportionately affects low-income populations
  - Increased morbidity and mortality
  - Reduced life expectancy by 10-15 yrs
  - Heart healthy diets may lower risk of heart disease by 28% and decrease risk of premature death by 31%
  - Low-income groups have reduced access to nutritious foods related to several barriers.

The Social Determinants of Health:

How Poverty Impacts Cardiovascular Disease Risk

Lower Income → Food Insecurity → Poor Nutrition → CVD → Increased Costs → Lower Income

Food Pharmacy Concept:

- Community-based programs designed to increase access, knowledge, & consumption of healthful foods
- Aim prevent/ manage chronic disease by removing barriers to healthy eating

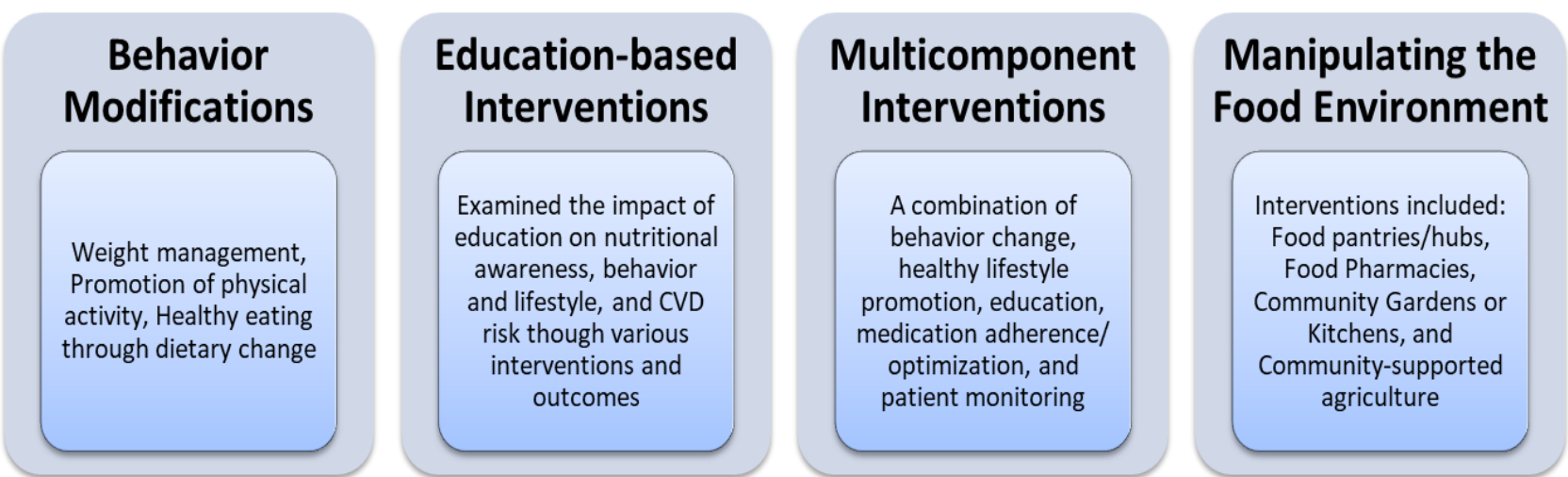PRISMA / Literature Table / References

Purpose

To reduce CVD risk within a low-income community by removing barriers to healthy eating, increasing knowledge regarding nutrition, and integrating / coordinating nutrition interventions between the local community and healthcare system.

Review of Literature

Community-based, nutrition-focused interventions were effective for reducing CVD risk in low-income groups

Behavior Modifications
Weight management, Promotion of physical activity, Healthy eating through dietary change

Education-based Interventions
Examined the impact of education on nutritional awareness, behavior and lifestyle, and CVD risk though various interventions and outcomes

Multicomponent Interventions
A combination of behavior change, healthy lifestyle promotion, education, medication adherence/ optimization, and patient monitoring

Manipulating the Food Environment
Interventions included: Food pantries/hubs, Food Pharmacies, Community Gardens or Kitchens, and Community-supported agriculture

Methods

An evidence-based practice project was initiated to establish a Food Pharmacy program between September 2024 & Dec 2024.

Intervention: Implement a Food Pharmacy
Setting: Underserved urban community food hub
Intervention Components:
- Assisted Shopping
- Health screenings
- Referrals
- Meal Planning
- Health Education

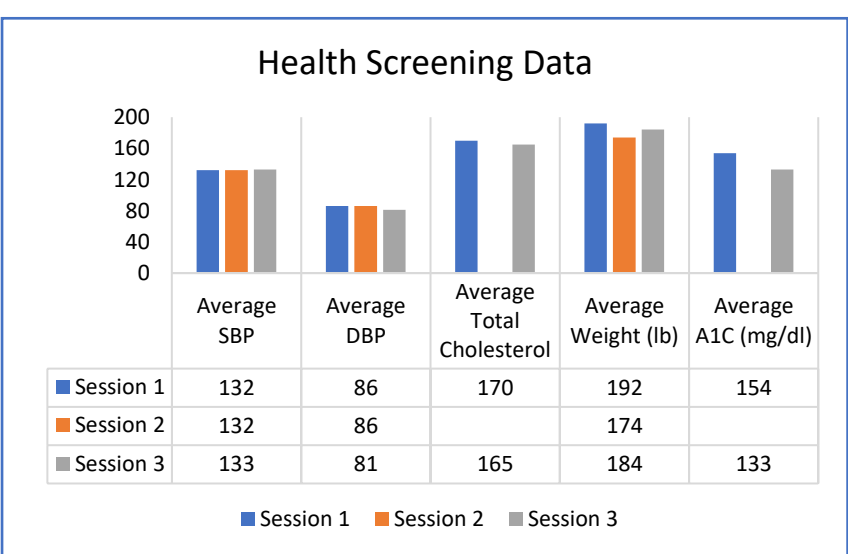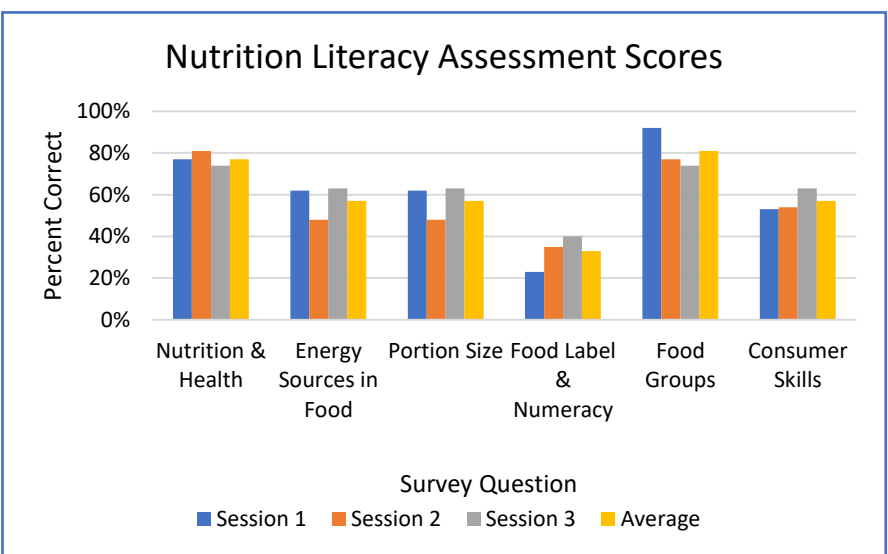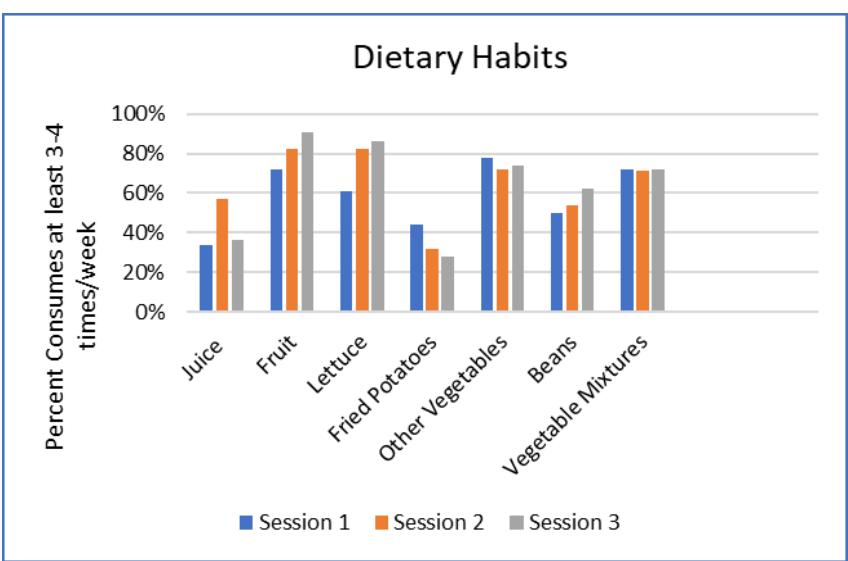**Intervention Facilitators**: Volunteer Healthcare Workers
Outcome Measures:
- Dietary Habits
- Nutrition Literacy
- Blood Pressure
- A1C
- Cholesterol
- Weight

Findings

Documented Visits: **N = 236**
- **Health Screenings**: 109
- **Coordination**: 28 PCP Referrals
- **Impact**: 62% Food Bank clients visited over 3 months
- **Dietary Habits**: Increased consumption of fresh produce & reduced intake of processed foods
- **Nutrition Literacy**: Improved knowledge of label reading, portion sizing, consumer skills, & energy sources in food

FOOD PHARMACY VISITATION

Utilization Category	Session 1	Session 2	Session 3	Both EDU & Shopping	Total
Both Education & Shopping	0	12	18	--	30
Education	25	12	11	30	78
Assisted Shopping	0	17	32	30	79
Health Screening	25	37	47	--	109
Total Food Pharmacy Visits	**50**	**78**	**108**		**236**
PCP Referrals	7	12	9	--	28
Survey	44	59	45		148

Dietary Habits (Percent Consumes at least 3-4 times/week) — Juice, Fruit, Lettuce, Fried Potatoes, Other Vegetables, Beans, Vegetable Mixtures — Session 1, Session 2, Session 3

Nutrition Literacy Assessment Scores (Percent Correct) — Nutrition & Health, Energy Sources in Food, Portion Size, Food Label & Numeracy, Food Groups, Consumer Skills — Session 1, Session 2, Session 3, Average

Health Screening Data

	Average SBP	Average DBP	Average Total Cholesterol	Average Weight (lb)	Average A1C (mg/dl)
Session 1	132	86	170	192	154
Session 2	132	86		174	
Session 3	133	81	165	184	133

Implications & Conclusions

- Conduct needs assessment to establish trust & increase likelihood of program utilization
- Utilize multimodal interventions and culturally diverse services to increase participation among all racial & ethnic groups
- Encourage engagement among community stakeholders for resource allocation, program expansion, sustainability, & enhanced credibility