



Community Garden Forum
Hosted by: The Dan River Region Obesity Task Force


Introductions

Dan River Region Obesity Task Force
Community-Academic Partnerships



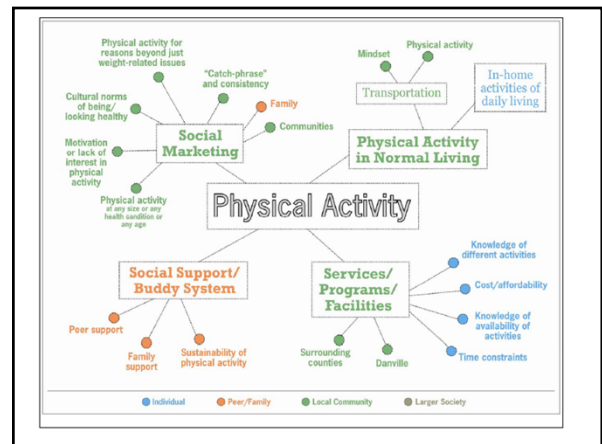
The Dan River Region Obesity Task Force

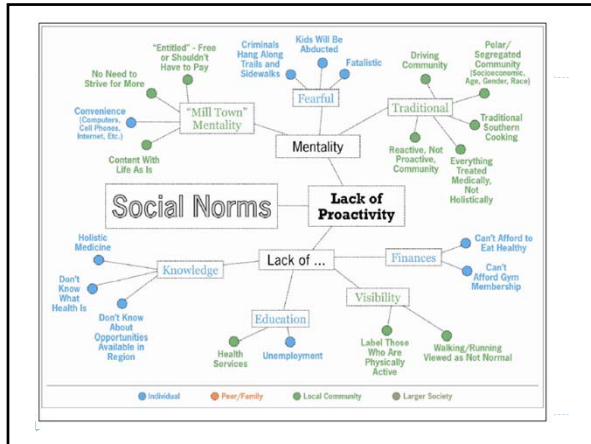
- ▶ October 2010-present
- ▶ April 2010-Comprehensive Participatory Planning & Evaluation Workshop to identify
 - ▶ root problems
 - ▶ key solutions, interventions or programs
 - ▶ key community organizations
 - ▶ current strengths/weakness of Dan River region to address the priority area



Developed 6 Causal Models Related to Obesity

1. Physical activity
2. Education
3. Social norms
4. Nutrition
5. Geographic planning
6. Environment






- ### Prioritized 3 Interventions
1. Social support programming to promote & support physical activity
 2. Social marketing campaigns to promote shifts in the health-related value systems of the community
 3. Community gardens to increase the accessibility of fresh & local foods

- ### Nutrition Subcommittee Progress
- ▶ Summer 2010: Danville Parks and Recreation & Virginia Tech collaborate
 - ▶ Summer 2010: Summer interns at the Danville Regional Foundation focus on community gardens
 - ▶ August 2010: Obesity Task Force focus efforts on:
 - ▶ Physical Activity
 - ▶ Social Norms
 - ▶ Nutrition and Education

- ### Nutrition Subcommittee Progress
- ▶ September and October 2010
 - ▶ Logistics of community gardens
 - ▶ November 2010
 - ▶ Dan River Region Obesity Task Force awarded funding from Virginia Foundation for Healthy Youth
 - ▶ Goal: Strengthen Obesity Task Force partnerships
 - ▶ Goal: Engage community members into developing and evaluating a community garden
 - ▶ Fall/Winter 2010
 - ▶ Several stakeholders awarded funding to implement community gardens

Why are Community Gardens Good?



Scientific Evidence Surrounding Community Gardens

Jamie Zoellner, PhD, RD
Ashley Zanko, Graduate Student



- ### Overview
- ▶ Farmer's markets vs. community gardens
 - ▶ Evidence-based review
 - ▶ Review of evidence
 - ▶ Community-wide review
 - ▶ Youth review
 - ▶ Benefits vs. Barriers
 - ▶ Overall recommendations
 - ▶ Considerations when implementing and evaluating community-gardens
 - ▶ Future directions

- ### Farmer's Markets vs. Community Gardens
- ▶ **Farmer's market**
 - ▶ markets at fixed locations where farm products are sold by farmers
 - ▶ **Community gardens**
 - ▶ any piece of land gardened by a group of people
 - ▶ shared open spaces where individuals garden together to grow, fresh, healthful, and affordable fruits and vegetables



- ### What evidence suggests that community gardens:
- ▶ **increase fruit and vegetable intake?**
 - ▶ influence energy intake and overall diet?
 - ▶ **influence physical activity such as increases light and/or moderate-intensity activity levels?**
 - ▶ **influences weight?**
 - ▶ **provide non-health benefits to communities such as community development, community-building, civic engagement, community beautification, and other social outcomes?**

- ### Why start with an evidence-based review of community gardens (CG)?
- ▶ **Let the science inform:**
 - ▶ Planning of CG
 - ▶ Implementation of CG
 - ▶ Evaluation and targeted outcomes of CG
 - ▶ Assessment of long-term sustainability of CG
 - ▶ **Identify gaps in the scientific literature:**
 - ▶ Address gaps
 - ▶ Positioned for funding opportunities

Evidence-Based Review

ELEMENTS	GRADE
▶ Quantity	▶ Good/Strong
▶ Consistency	▶ Fair
▶ Quality	▶ Limited/Weak
▶ Clinical Impact	▶ Expert Opinion Only
▶ Generalizability	

What evidence suggests that community gardens:

▶ increase fruit and vegetable intake?	▶ Good/Strong
▶ influence energy intake and overall diet?	▶ Fair
	▶ Limited/Weak
	▶ Expert Opinion Only
▶ influence physical activity such as increases light and/or moderate-intensity activity levels?	
▶ influences weight?	
▶ provide non-health benefits to communities such as community development, community-building, civic engagement, community beautification, and other social outcomes?	

Review by McCormack and colleagues

- ▶ 16 articles included
 - ▶ 7 articles= WIC Famer's Market Nutrition Program
 - ▶ 5 articles= USDA Famer's Market for Seniors
 - ▶ 4 articles= Community gardens
- ▶ Of the 4 community garden studies, none were intervention articles
- ▶ 11 articles cross-sectional
- ▶ 5 articles intervention


Review by McCormack and colleagues

- ▶ 16 articles included
 - ▶ 10 articles= Fruit and vegetable intake
 - ▶ 7 articles= Attitudes and beliefs regarding buying, preparing, or eating fruits and vegetables
 - ▶ 7 articles= Behaviors regarding obtaining produce from farmer's markets or community gardens
 - ▶ 5 articles= Perceptions regarding obtaining produce from farmer's markets or community gardens
 - ▶ 0 articles= Weight-related outcomes such as overweight/obesity

What evidence suggests that community gardens:

▶ increase fruit and vegetable intake?	LIMITED/WEAK
▶ influence energy intake and overall diet?	▶ EXPERT OPINION ONLY
▶ influence physical activity such as increases light and/or moderate-intensity activity levels?	▶ EXPERT OPINION ONLY
▶ influences weight?	▶ EXPERT OPINION ONLY
▶ provide non-health benefits to communities such as community development, community-building, civic engagement, community beautification, and other social outcomes?	▶ FAIR

What evidence suggests about youth garden-based nutrition education intervention programs:



What evidence suggests about **youth** garden-based nutrition education intervention programs:

- ▶ impact fruit and vegetable intake among youth?
- ▶ influence willingness to taste fruits and vegetables among youth?
- ▶ influence preference for fruits and vegetables among youth?
- ▶ influence other nutrition related outcomes among youth?
 - ▶ Nutrition knowledge
 - ▶ Self-efficacy
 - ▶ Obesity

- ▶ Good/Strong
- ▶ Fair
- ▶ Limited/Weak
- ▶ Expert Opinion Only

Review by Robinson-O'Brien and colleagues

▶ 11 articles included the following outcomes:

- ▶ 4 articles= Fruit and vegetable intake
- ▶ 3 articles= Willingness to taste fruits and vegetables
- ▶ 6 articles= Fruit and vegetable preferences
- ▶ 6 articles= Nutrition-related knowledge
- ▶ 2 articles= Self-efficacy to consume fruit and vegetable
- ▶ 0 articles= Weight-related outcomes such as overweight/obesity

Review by Robinson-O'Brien and colleagues

▶ 11 articles included – youth based

- ▶ 5 articles= In-School
- ▶ 3 articles= Afterschool
- ▶ 3 articles= Community

- ▶ 5 articles were pre-post design
- ▶ 1 article compared gardeners vs. non-gardeners
- ▶ 5 included intervention/control
 - ▶ 3 compared garden based nutrition education vs. traditional nutrition education alone

What evidence suggests about **youth** garden-based nutrition education intervention programs:

- ▶ impact fruit and vegetable intake among youth?
 - ▶ LIMITED/WEAK
- ▶ influence willingness to taste fruits and vegetables among youth?
 - ▶ LIMITED/WEAK
- ▶ influence preference for fruits and vegetables among youth?
 - ▶ LIMITED/WEAK
- ▶ influence other nutrition related outcomes among youth?
 - ▶ Nutrition knowledge LIMITED/WEAK
 - ▶ Self-efficacy LIMITED/WEAK
 - ▶ Obesity EXPERT OPINION ONLY

What does this all mean???

- ▶ Majority of questions have LIMITED/WEAK evidence or EXPERT ONLY OPINION....
- ▶ WHY??
 - ▶ Quantity
 - ▶ Consistency
 - ▶ Quality
 - ▶ Clinical Impact
 - ▶ Generalizability
- ▶ This region and the Dan River Region Obesity Task Force are well positioned to fill this gap in the evidence!
- ▶ Let the science inform planning, implementation, evaluation and assessment of our community gardens!

Benefits vs. Barriers

Additional community benefits

- ▶ Community building
- ▶ Civic engagement
- ▶ Social well-being
- ▶ Social connection within the context of nature

Benefits vs. Barriers
What barriers may need to be considered?

- ▶ Accessibility
 - ▶ Zoning regulations
 - ▶ Barriers to household participation (i.e. transportation)
- ▶ Incentives to increase participation
- ▶ Conflict among participants
- ▶ Vandalism
- ▶ Soil contamination

Overall Recommendations

- Considerations when implementing and evaluating community-gardens
- Future directions

Considerations when implementing and evaluating community-gardens
 Robinson-O'Brien, 2009

1. Intervention planning
2. Study design and evaluation
3. Outcome measures
4. Program sustainability

1. Intervention Planning

- ▶ Needs assessment prior to intervention
- ▶ Involvement of stakeholders and target population
- ▶ Quantitative and qualitative investigation as a guide
- ▶ Principles of Community-Based Participatory Research

2. Study design and evaluation

- ▶ Previously validated tools or pilot test and validate assessment tools prior to use
- ▶ Use adequate sample sizes
- ▶ Garden-based nutrition education vs. traditional nutrition education
- ▶ Need for control groups – randomized trials
- ▶ Longitudinal study to determine changes in outcomes over time

3. Outcome measures

- Evaluate changes in dietary intake among youth and families
 - Other physical and health-related outcomes
- Examine which aspects of the garden-based nutrition education are most critical:
 - Participation in garden planning and planting
 - Maintenance and harvest
 - Food preparation
 - Tasting
 - Nutrition education lessons

4. Program sustainability

- Evaluate facilitators and barriers to long term sustainability of programming
- Include process survey data in evaluation, in a effort to inform future interventions
- Link school subjects and learning objectives to garden based nutrition education and assess/monitor the outcomes

Future directions

- ▶ Cooperative partnerships
- ▶ Well-designed, methodological research study
- ▶ Investigate whether garden-based nutrition education programs impact dietary outcomes in youth
- ▶ Evaluate obesity prevention strategies

Voices from Experience

Panel Discussion

Voices from Experience

Panelist	Topics
▶ Rev. Delaware Clark – Cherrystone Missionary Baptist Association	▶ Vision/experiences with community gardens
▶ Shewana Hairston –VA Cooperative Extension	▶ Evaluation of successes
▶ Jacob McCann – Danville Parks & Recreation	▶ Challenges in implementation
▶ Morris White –VA Cooperative Extension	▶ Resources for short and long term successes
▶ Constance Henderson – Cardinal Village	