

KANSAS FARMERS MARKET ASSESSMENTS: AN INTERNSHIP AT THE KANSAS
DEPARTMENT OF HEALTH AND ENVIRONMENT

By

PATRICK STEELE

B.S. Nursing, Washburn University 2011

A FIELD EXPERIENCE REPORT

Submitted in partial fulfillment of the requirements for the degree

MASTER OF PUBLIC HEALTH

Department of Kinesiology
College of Human Ecology

KANSAS STATE UNIVERSITY
Manhattan, Kansas
2014

Approved by:

Major Professor
Mary McElroy

Abstract

The Kansas Department of Health and Environment focuses on the health and wellness of Kansas residents through multiple factors of health promotion. This report will focus on an internship at the Department of Health and Environment. The paper will focus on the internships two primary objectives: Kansas Farmers Market dot survey, and the Physical Activity Championship Guide.

The Kansas Farmers Market dot survey was created to assess customer's perception of the farmers market, and to analyze spending's as well as motivational factors to attend and shop at local farmers markets. This includes a review of literature about the benefits farmers markets can provide to customers.

The Physical Activity Championship toolkit provides resources and networking for physical activity innovators across all counties in the state of Kansas. The toolkit includes large amounts of resources for promoting physical activity in communities across multiple social ecological levels, ranging from the individual to policy level interventions. Real world experience provided exceptional education experience and allowed application of class knowledge in a state health level setting.

Table of Contents

Chapter 1 – Introduction.....	4
Purpose.....	5
Chapter 2 – Kansas Senior Farmers’ Market Nutrition Program.....	6
Overview.....	6
Review Of Literature.....	6
Dot Survey.....	8
Survey Response Data.....	9
Chapter 3 – Kansas Physical Activity Championship Toolbox.....	11
Overview.....	11
Research and Collaboration.....	12
Review Of Literature.....	13
Annotated Bibliography.....	14
Chapter 4 – Internship Experience.....	15
Objectives.....	16
Internship Reflection.....	18
Conclusion.....	20
Chapter 5 - Bibliography.....	21

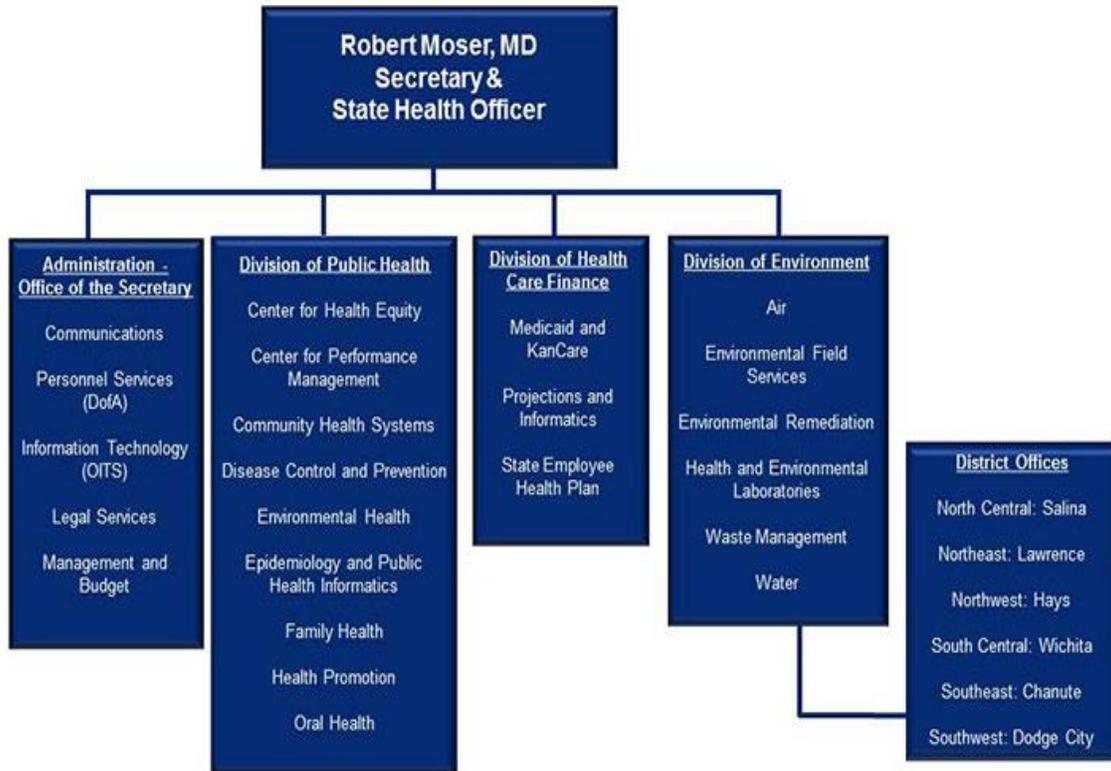
Chapter 1 - Introduction:

Kansas Department of Health and Environment and Division of Public Health

The Kansas Department of Health and Environment (KDHE), located in Topeka Kansas, focuses primarily on the health and wellness of Kansas residents through multiple factors of health promotion. The Physical Activity/Nutrition program is housed within the KDHE, and directed by the Secretary and State Health Office Dr. Robert Mosier. The Physical Activity/Nutrition department is considered it's own entity within the Bureau of Health Promotion. Significant collaboration between departments of Kansas government programs utilizes the resources that the Physical Activity/Nutrition program offers. Collaborating entities include but are not limited to: Kansas Department of Transportation (KDOT) Kansas Department of Agriculture (KDA) and Kansas Division of Public Health (KDPH). The Physical Activity/Nutrition program's primary goal is to increase awareness and knowledge of the health benefits through healthy eating and physical activity.

The Bureau of Health Promotion (BHP) focuses on improving overall quality of life for Kansas Residents. The BHP covers a large field in regards to health promotion, focusing on many factors such as: school health, tobacco prevention, physical activity/nutrition, and chronic disease prevention/early prevention (Health Promotion, 2013). The mission statement of the BHP: Through partnerships with the people of Kansas, promote healthy behaviors, policies and environmental changes that improve

the quality of life and prevent chronic disease, injury and premature death (Health Promotion, 2013)



Purpose

This report is primarily focused on my field experience working with the Department of Health and environment. The experience primarily focused on the Senior Farmers Market program. I also was able to partake in related to the State of Kansas Physical Activity Champion toolbox. A large focus of my internship was management and logistical planning of the Capital City Farmers Market and the Senior Farmers Market Program.

Chapter 2 - Kansas Senior Farmers Market Program

Overview

The primary focus of the internship was to conduct promotional research for the Kansas Senior Farmers' Market program (SFMNP). The SFMNP is administered through state agencies that allows low-income seniors to purchase eligible foods (fruits, vegetables, honey and fresh-cut herbs) at farmers markets, roadsides stands and community supported agricultural programs with the use of coupons provided by state agencies (Department of Agriculture, 2013). The program requires that all products purchased with the coupons be native to the State of Kansas, and no out of state produce or products can be obtained with SFMNP coupons.

Review Of Literature

Individuals who consume fruits and vegetables regularly have a correlation with a decreased risk for cardiovascular disease, certain cancers and other chronic health diseases. (World Cancer Research 2007). While farmers markets vary in location and accessibility, the development and promotion of farmers markets have increased; with a primary reason due to the accessibility to community-wide fruit and vegetable availability (Larson Et al. 2009). The Kansas Senior Farmers Market Program was created to increase the availability of affordable produce for low-income residents of Kansas. A 2010 review of Farmers Markets and the implications of residents showed that farmers markets provided an increase in availability of fresh fruits and produce to low income residents and other individuals who relied on supplemental nutrition programs (McCormack Et al. 2010). This provides an

invaluable service, as the National surveillance data reports less than 3% of men and 6% of women achieve the recommended servings of vegetables and fruits listed by MyPyramid (Guenther, P. Dodd, K. Reedy, J & Krebs S. 2006). In addition, Low-income populations are less likely to achieve these recommendations compared to high-income populations (Kamphuis Et al. 2006).

A study conducted by Kunkel Et al (2003) evaluated the SFMNP on participants and their fruit and vegetable consumption. 15,00 seniors were recruited and provided with \$50 farmers market coupons in South Carolina. A random sampling of 1,500 individuals yielded a 43% response rate regarding the assessment of fruit and vegetable consumption. 62% of seniors reports that the coupons changed the way in which they ate on a daily basis, 88.5% reported they would consume more fruits and vegetables than they originally consume, and 54% of respondents reported buying fruits and vegetables with their own money.

Lynne Et al (2004) conducted a qualitative assessment of satisfaction and utilization of a SFMNP in Seattle to address thoughts, perceptions and overall satisfaction of the SFMNP program. Individuals reported that they used most or all of the food items that were purchased, with less waste reported from fruits. This most likely stems from fruits not needing to be cooked or prepared, and can be eaten as purchased. Many individuals reported that they would not have been able to purchase as much food as they had if it weren't for the SFMNP program, and the overall census of the program was highly favorable.

Those interviewed reported their perceived benefits from the program in the study. Many individuals reported the products available were very fresh and

numerous, with many reporting it was the only way in which they would be able to obtain fresh fruits and vegetables. Many reported increases in quality of life and improved psychological well-being.

Dot Survey

The KDHE's Physical Activity/Nutrition program conducted on site farmer's market surveys to solicit input from customers about local farmers markets. The Dot survey required individuals to place circular stickers on large white boards, which asked questions pertaining to their motivation for attending local farmers markets, as well as their actions at local farmers markets. The Dot survey took into account total attendance at the farmers market to adjust for per capita ratio. 12 farmers markets were recruited to participate in the Dot survey. The Dot survey was set up by acquiring a booth on location and recruiting customers by asking if they are interested in providing information to improve farmers markets across the State of Kansas. Individuals who are interested in participating were educated about the surveys intentions, and provided with circular sticky dots and informed to place stickers on the appropriate answer. As of September 2013, a total of 6 Dot surveys were conducted, with large responses gathered from each of the farmers markets. Tote bags with the seals of the individual farmers markets were provided at no cost to the customers attending the farmers market to foster a positive relationship between KDHE and the Farmers Markets/customers. Approximately 5,000 tote bags were ordered and are to be distributed for the remainder of the survey study.

Dot Survey data

A total of six questions were asked to the public, focusing on determinants for shopping at the farmers market, party size, distance travel to the farmers market and frequency of attending the farmers market. The participant was able to choose from multiple answers that best fits their response. As of August 10 2013, a total of seven rapid market assessments have been completed. A total of 8,741 customers visited the seven farmers markets. 1,251 customers participated in the survey, totaling a 14.3% response rate.

Survey Response Data

Question 1: How Many are in your Shopping Party?

Answers	1	2	3	4+
Total Responses	404	548	182	116
Percentage	32.3%	43.8%	2.1%	9.3%

Question 2: How much will you (or have you) spent in the market today?

Answers	\$0-5	\$6-9	\$10-14	\$15-19	\$20+
Total Responses	202	195	273	174	406
Percentage	16.1%	15.6%	21.8%	13.9%	32.5%

Question 3: Has shopping at the farmers' market caused you to shop at neighborhood business and restaurants more often?

Answers	Yes	No
Total Responses	719	530
Percentage	57.5%	42.4%

Question 4: Why do you shop at the market?

Answers	Fresh Produce	Price	Convenience	Support Local Business
Total Responses	843	50	34	324
Percentage	67.4%	4.0%	2.7%	25.9%

Question 5: Throughout the farmers' market season, how often do you shop at the market?

Answers	Every Week	Every Other Week	Once a Month	Once a Season
Total Responses	546	393	207	104
Percentage	43.6%	31.4%	16.5%	8.3%

Question 6: How far do you live from the market?

Answers	0-3 miles	4-6 miles	7-9 miles	10+ miles
Total Responses	563	275	123	290
Percentage	45.0%	22.0%	9.8%	23.2%

Currently, our results concluded that a majority of shopping was completed in parties of two. The primary focus for shopping at the farmers market was for fresh produce and to support local businesses. A majority of the customers attended the farmers market weekly or bi weekly, and only 24.8% responding as monthly or seasonal shoppers. Local residents largely supported weekly shoppers Farmers markets. 67% of responses reported living 0-6 miles from the local farmers market. It was interesting to see 23.2% of responders reported distances of 10+ miles, thus making this the second most popular answer. This could possibly be due to location of the farmers market, causing individuals from neighboring towns, which do not have a local farmers market to travel longer distances.

The data may support that weekly shoppers may purchase all produce consumed for the week from the local farmers market. 46.4% of customers reported spending \$15+ on the farmers market, with a weekly attendance of 43.6% of reporting customers. Future analysis of why individuals shop at the farmers market

may wish to inquire if individuals obtain their produce primarily from farmers markets.

Chapter 3 - State of Kansas Physical Activity Champion Toolbox

Overview

The physical Activity Champion Toolbox (PA toolbox) provides resources for counties and cities to promote physical activity and wellness through designated physical Activity champions in each county. A physical activity champion is an individual in each county that is designated by the state health officer to promote physical activity within their community. The individual is selected by a volunteer basis, and usually serves in a leadership or health promotion role within the community. Individuals such as mayors, physical activity educators or innovators within the community are recruited to become physical activity champions. The tenure of a physical activity champion is a year long period, and the individual has the right to terminate their experience after one year or continue if he or she wishes to continue to perform their duties.

The resource provides the champions with a variety of network accessibilities across counties to help promote physical activity facilitation and collaboration, policies and outside resources such as foundations that can be used by physical activity champions to promote large-scale county/city physical activity projects. The physical activity toolkit provides information about the benefits of

physical activity, requirements recommended by the ACSM and CDC for physical activity requirements, as well as ways to be physically active within the community. The toolkit provides physical activity programs that can be implemented within communities to help foster physical activity. Such programs include: walk to school programs, worksite wellness programs, healthy nutrition promotion programs and methods of improving environment to promote physical activity. Guides to creating physical activity coalitions are provided, and instructions to perform needs based assessments are included.

The physical activity champions are also connected through networks with other physical activity champions across the state of Kansas. This allows for collaboration and the sharing of ideas to help promote growth, and grant access to other ideas and methods of physical activity promotion through expert resources.

Research and Collaboration

Due to the infancy of the PA toolbox, the primary goal was to evaluate physical activity campaigns and resources to include in the PA toolbox. My main objective was to evaluate multiple physical activity campaigns and interventions to include in the PA toolbox. Collaboration between other entities within the Department of Health and Environment allowed me to attend multiple summit meetings and to actively participate in discussions on how to effectively market and distribute the PA toolbox. Meetings with the State Health Officer Dr. Mosier provided insight on the goals and objectives that KDHE wished to accomplish with the PA toolbox, and to help identify potential PA champions.

Review Of Literature

Public Health policy has been crowned as one of the most beneficial and cost-effective interventions for physical activity and other public health issues. (Harris & Mueller 2013). Providing resources for counties to promote physical activity behaviors allows for innovators to utilize programs, which have success in real world settings. When we assess the benefits of social networking for health promotion, Puglia et al (2011) reported significant life changes and health outcomes due to the interaction and collaboration of individuals through social networking. Opportunities for health collaboration can increase health promotion, and self-efficacy, and can empower individuals to make positive health changes in their life.

One of key components of the program is the use of innovators within the community to promote physical activity (Seguin Et al. 2008). Seguin and colleagues evaluated the effectiveness of leadership driven physical activity implementation. A significant increase in physical activity within the community was recorded with the use of trained innovators. Leadership traits and experience with physical activity reported a marked increase between implementation and educational attainment.

Annotated Bibliography of Physical Activity Resources

Turner, L., Chriqui, J., & Chaloupka, F. (2013) Walking school bus programs in U.S public elementary schools. *Institute for Health Research and Policy*, 10(5), 641-645

The walking school bus (WSB) program is an intervention where adults walk with groups of children on fixed routes to and from school. This provides children with a safe way to school while achieving physical activity through active transportation. Through a nationwide survey after the implementation of the program in 2008, 4.2% of schools organized WSB programs, with an increase to 6.2% from 2009-2010.

Feliciano, L., McCreary, L., Sadowsky, R., Peterson, S., Hernandez, A., McElmurry B., & Park, C. (2009). Active Living Logan Square: joining together or create opportunities for physical activity. *American Journal of Preventative Medicine* 37(6) S361-367

The Active Living program targets audiences within local communities to increase physical activity through three primary goals: (1) Enhance school environments and practices to support physical activity before, during and after the school day; (2) encourage individuals and families to enjoy outdoor activities in their own communities; and (3) create safe, inviting places that connect to surrounding communities. This program created multiple trails connecting communities throughout Chicago IL and promoted a healthy environment at McAulliffe Elementary school through policy and programs.

Belza B. and the PRC-HAN Physical Activity Conference Planning Workgroup (2007). Moving Ahead: Strategies and Tools to Plan, Conduct, and Maintain Effective Community-Based Physical Activity Programs for Older Adults. *Centers for Disease Control and Prevention: Atlanta, Georgia*

The RE-aim program provides a comprehensive framework for program planning and evaluation. This helps implement health programs within the community by evaluating programs through the re-aim acronym process: Reach, effectiveness, adoption, implementation and maintenance.

Partnership for Prevention. (2008) Social Support for Physical Activity: Establishing a Community-Based Walking Group Program to Increase Physical Activity Among Youth and Adults—An Action Guide. *The Community Health Promotion Handbook* 1-40

The health promotion handbook translates evidence-based recommendations into a “how to” guide for implementation of effective community-level health promotion strategies. The guide provides practitioners and health promotion experts on subjects of advocacy, policy implementation, and community based organization strategies.’

Kahn Et al. (2002) The Effectiveness of Interventions to Increase Physical Activity: A Systematic Review. *American Journal of Preventative Medicine* 22(4S) 73-107

Provides a systematic review to evaluate the effectiveness of various approaches for increasing physical activity. Multiple intervention models were evaluated based on the approach (environmental, social, behavioral etc.). The review provides additional information about applicability, barriers of implementation and recommendations for future use of the intervention programs.

Chapter 4 - Internship Experience

Internship overview

My internship was conducted at the Kansas Department of Health and Environment in Topeka, Kansas under the instruction of Physical Activity Nutrition direct Dr. Anthony Randles. My main focus during the 170-hour internship was to assist Dr. Randles with work focused on the Kansas Senior Farmers Market Program and the Physical Activity Championship toolbox.

A large portion of my time was spent collaborating with multiple farmers markets across the state of Kansas to plan for the KDHE and the KDA to conduct dot surveys and perform rapid market assessments on the local farmers markets. I was given contacts of all farmers markets across Kansas that expressed interest in participating in the dot survey. I coordinated the time and date in which the rapid market assessment would take place, and ensured that no dates conflicted with any

other important projects or events. I was involved with the actual survey assessments, and helped conduct two rapid market assessment/dot surveys.

With the rapid market assessments, we requested the help of local volunteer committees to assist us with the rapid market assessments. Volunteers were needed during the assessments to count individuals entering the farmers markets at natural entry points of the farmers market. Volunteers were also utilized to hand out tote bags, and to help with recruitment of individuals to participate in the dot survey. Prior to my internship experience, no volunteer agencies had been contacted, and the recruitment phase of volunteers was tasked as one of my primary goals at the department. I focused on local community organizations such as the Boy Scouts of America, 4H clubs and the United Way. Each organization's chapters were contacted in the local farmers market communities and were recruited to help at the local farmers market. Flyers were distributed through the hierarchy of the organizations to promote awareness and recruitment for the events.

Objectives

I had multiple objects I wished to accomplish during my tenure at the KDHE. I identified three key objectives during the beginning of my internship with Dr. Randles to help guide my experience while interning at the KDHE.

1. Understand the goals and objectives of a health organization at the state level.
2. Identify strategies for health promotion techniques to benefit health across the state.

3. Acquire knowledge and practices for public health professionals in a real world setting, and participate in tasks set by the health organization.

All three objectives were accomplished during my internship. Goal one was accomplished by understanding the mission statement of the KDHE, and acquiring the “how and why” practices of the department for each of their health promotion programs. Dr. Mosier had clearly defined and measured goals that the department hopes to accomplish, through the Healthy Kansas 2020 goals.

The second objective was accomplished by the methods and practices for the interventions implemented through the KDHE on to the public. The department focused on evidence based practice for their interventions. Many health promotion techniques were based on previous programs that proved to be successful. A key focus to all of the health promotion techniques was sustainability, and I realized how important that a self sustaining program was to a programs lifespan.

The last objective was accomplished by my participation in the health promotion environment. I attended multiple meetings and summits regarding the health status of Kansas residents, and was an active participant in the problem solving steps to decrease health disparities. I provided input and helped in the critical thinking process with program implementations. I also helped with data research through the dot survey, and presented the results to Dr. Mosier during a phone interview with many entities of the State Health Office.

Internship reflection

Overall I felt that I gained a large understanding of how public health works in a real world setting. I entered into the internship with experience dealing with the public, but focused mainly on primary care medicine and acute care treatment. The experience I had was different than I have ever experienced before. It was exciting to be a part of the actual system, which promoted health across the state of Kansas and how the ideas and programs of health promotion actually become implemented in a real world setting. It was interesting to see the actual results of projects and the data that was presented to show there was actual impact on societies in Kansas based on previous health promotion techniques.

The internship also showed me how many entities within health promotion collaborated together to promote healthy living across Kansas. The Department of Physical Activity/Nutrition collaborated with many entities, including the Governors council on fitness to help promote physical activity within the capital buildings and state governmental offices. Dr. Randles and I served on the Capital City Wellness group to help promote physical activity throughout the state offices, which served more than 30,000 individuals who's primary work setting was desk oriented. We collaborated together from different entities of health promotion to increase physical activity throughout the workday, promoted smoking cessation, and helped to increase healthy eating choices. Another significant collaboration to promote healthy choices was that of the Physical Activity/Nutrition department and the Kansas Department of Agriculture.

Together, the creation of the Capital City Farmers market was established, and served the individuals of the capital city buildings to fresh fruits and vegetables grown locally. With the help of the Department of Agriculture, healthy produce and fruits were offered to individuals in an outdoor farmers market setting. This allowed for individuals to leave their office setting and engage in active transportation while purchasing locally grown produce. With an average of 3,000 individuals attending the market, the market provided a great opportunity for individuals to be physically active and make healthy nutrition choices.

While much of my internship was very productive and provided me with a great educational experience, I did find faults within the department. I noticed that the entire system was very political. While many positive ideas and programs were submitted for approval, a large portion of the programs were denied due to the program not supporting the governors view of how public health should be implemented to the public. The main ideology for physical activity was that government should not be the primary enforcer of physical activity within a community setting, and the responsibility should be on the individual. This led to complications with the implementation of many physical activity enforcers, such as policy changes within schools, environmental changes such as bike lanes, and community physical activity programs to provide access to methods of being physically active. Many other programs and health promotion entities did not consider physical activity to be beneficial with their goals, and we found it difficult to provide input during meetings and program planning sessions when collaborators felt our skills were not sufficient or provided use in their health

promotion setting. While this was rare, it did cause problems with collaboration between a few health entities and us.

Conclusion

During my internship at the Kansas Department of Health and Environment, I gained a vast amount of experience in real world public health. I was able to understand and comprehend much of the day to day business that was conducted thanks to my previous coursework, and was able to be actively engaged in the health promotion setting thanks to my previous coursework. I was allowed to think critically, be creative with health promotion, and solicit input based on my experience with both primary health care and education to provide valuable insight on how to accomplish the tasks and goals set before me. I was fortunate to work with a wonderful mentor who provided me with clear goals and expectations. I was expected to provide quality work and to solve problems critically, but was also able to consult with my advisor to solicit input on ways to solve the tasks given to me. I feel this experience has led me to grow as a future health promotion specialist, and I believe that I am more prepared to enter the health profession than I was before I accomplished my field experience. The Department of Health and Environment was a wonderful place to intern, and I feel that they provided me with an excellent opportunity to challenge myself both academically and professionally.

Chapter 5 – Bibliography

- American Institute for Cancer Research. (2007) Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective. Washington, DC: *World Cancer Research Fund*
- Belza B. and the PRC-HAN Physical Activity Conference Planning Workgroup (2007). Moving Ahead: Strategies and Tools to Plan, Conduct, and Maintain Effective Community-Based Physical Activity Programs for Older Adults. *Centers for Disease Control and Prevention: Atlanta, Georgia*
- Department of Agriculture. (2013) Retrieved September 9, 2013, from United States Department of Agriculture: <http://www.fns.usda.gov/sfmnp>
- Feliciano, L., McCreary, L., Sadowsky, R., Peterson, S., Hernandez, A., McElmurry B., & Park, C. (2009). Active Living Logan Square: joining together or create opportunities for physical activity. *American Journal of Preventative Medicine* 37(6) S361-367
- Guenther, P., Dodd, K., Reedy, J., & Krebs-Smith, S. (2006) Most Americans eat much Less than recommended amounts of fruits and vegetables. *Journal of American Dietetics Association*. 106:137-139
- Harris, J. Mueller, N.(2009) Policy activity and policy adaptation in rural, suburban, and urban local health departments. *Journal of Public Health Management & Practice*. 19(2) 1-8
- Health Promotion. (2013). Retrieved September 9, 2013, from Kansas Department of Health and Environment: <http://www.kdheks.gov/bhp>
- Kamphuis B., Giskes, K., De Bruijn, G., Wendel-Vos, W., Brug, J., Van Lenthe, F. (2006) Environmental determinants of fruit and vegetable consumption among adults: A systematic review. *British Journal of Nutrition*. 6;96:620- 635.
- Kahn Et al. (2002) The Effectiveness of Interventions to Increase Physical Activity: A Systematic Review. *American Journal of Preventative Medicine* 22(4S) 73-107
- Kunkel ME, Luccia B, Moore AC. (2003). Evaluation of the South Carolina seniors farmers market nutrition education program. *J Am Diet Assoc*. 103:880-88
- Larson NI, Story MT, Nelson MC. (2009). Neighborhood environments: Disparities in access to healthy foods in the US. *Am J Prev Med*. 36:74-81.

Lynne T. (2004). Qualitative assessment of participant utilization and satisfaction with the Seattle senior farmers' market nutrition pilot program. *Public Health Research, Practice, and Policy*. 1(01) 1-11

Partnership for Prevention. (2008) Social Support for Physical Activity: Establishing a Community-Based Walking Group Program to Increase Physical Activity Among Youth and Adults—An Action Guide. *The Community Health Promotion Handbook* 1-40

Puglia Et al. (2013) Building social networks for health promotion: Shout-out health, New Jersey. *Prev Chronic Dis* 2013;10:130018

Seguin Et al. (2008) Factors related to leader implementation of a nationally disseminated community-based exercise program: a cross-sectional study. *Int J Behav Nutr Phys Act*. 5: 62

Turner, L., Chriqui, J., & Chaloupka, F. (2013) Walking school bus programs in U.S public elementary schools. *Institute for Health Research and Policy*, 10(5), 641-645