

FACTORS IMPACTING THE IMPLEMENTATION OF EVIDENCE-BASED
WELLNESS PROGRAMS IN ILLINOIS SENIOR CENTERS

BY

JULIE L. BOBITT

DISSERTATION

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Doctoral Committee:

Assistant Professor Andiana Schwingel, Chair
Professor Emeritus Robert Rich
Associate Professor Laura Payne
Professor Wojtek Chodzko-Zajko

Abstract

Background: Older adults from racial/ethnic minority backgrounds, living in rural areas, or with lower socioeconomic status are more vulnerable to experience chronic diseases and conditions than their counterparts. Physical activity and proper nutrition have been shown to help prevent and manage these conditions. While evidence-based programs have been developed to increase physical activity and enhance nutrition in older adults, there has also been limited research to determine to what extent evidence-based programs actually reach individuals in local communities, especially vulnerable populations. **Purpose:** To identify the factors that impact the implementation of evidence-based physical activity, nutrition and/or chronic disease management programs in community senior centers in Illinois. **Methods:** The study utilized an implementation framework supported by the diffusion of innovations theory. A mixed methods research design that involved three phases was employed. Phase I included interviews with Area Agency on Aging (AAA) directors (n=4) in four Illinois regions. Phase II included surveys sent to all senior centers within the four regions (n=72). Phase III involved in-depth, semi-structured interviews (n=12) with a subset of senior centers including those: 1) offering evidence-based nutrition, physical activity or chronic disease management programs, and 2) offering nutrition, physical activity, or chronic disease management programs that were not evidence-based. **Results:** A variety of individual and organizational factors were discovered to influence the implementation of evidence-based nutrition or physical activity programs including limited knowledge, clientele preferences, demographic concerns, funding and competitive market for senior participation. **Discussion:** Results of the study increase our understanding, and add to the literature, important information regarding factors influencing

the dissemination and implementation of policies and practices related to evidence-based programs and preventive care by identifying gaps in the stages of the implementation process, and discovering barriers to senior center's participation in evidence-based programs such as clientele preferences, demographic changes, local competition, and program inflexibility.

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Chapter 1

Introduction

The population of older Americans is increasing at an unprecedented rate. In 2010, the number of individuals over the age of 65 reached 40.4 million (Administration on Aging, 2011), and it is estimated that by the year 2040, there will be 79.7 million older adults in the United States, accounting for roughly 21% of the population, (Administration on Aging, 2011). The older population living in the State of Illinois has grown from 1.9 million to 2.2 million in the past decade, and now represents 13% of the State population (United States Census Bureau, 2012). Additionally, the older population is projected to substantially increase its racial and ethnic diversity between 2010 and 2050. By 2050 it is estimated that 42% of the older adult population in the United States will be racially diverse. The percent of Hispanics age 65 and older is projected to be more than double in the next four decades and older Asians are expected to make up 22% of the older adult population (Grayson & Velkoff, 2010). In Illinois 19.7% of older adults represent a racial or ethnic minority group.

As individuals age, they are more likely to experience chronic diseases and conditions such as arthritis, diabetes and heart disease, as well as disabilities that result from injuries such as falls (Administration on Aging, 2012). Older adults who are a racial or ethnic minority, live in a rural area, or those with lower socioeconomic status are even more likely to experience chronic diseases (Louie & Ward, 2011), (National Rural Health Association, 2012). Chronic diseases accounted for 27% of deaths and disability in the State of Illinois in 2008 (Centers for Disease Control, 2008). Although common and costly, many chronic diseases are also preventable. Many chronic diseases are linked to lifestyle choices that can be changed. Eating

nutritious foods and becoming more physically active can help keep people from developing many of these diseases and conditions.

Physical activity has been shown to have a positive impact on the major chronic diseases of aging (King & King, 2010). There is much research to support the idea that increasing physical activity levels can reduce chronic and disabling conditions that tend to occur disproportionately in the older adult population. Kruger, Carlson, and Buchner (2007) reported that “regular physical activity can reduce age-related functional decline, as well as people’s risk for chronic diseases such as coronary heart disease, hypertension, colon cancer, and diabetes” (p. 1). In 2009 the American College of Sports Medicine released a Position Stand on exercise and physical activity for older adults which states that regular physical activity can limit the development and progression of chronic diseases and disabling conditions (Chodzko-Zajko et al., 2009). While it has been established that older adults benefit from regular physical activity, adults over age 65 are still one of the most inactive age groups and older minorities are even less likely to be physically active (Marshall et al., 2007). According to the Centers for Disease Control and Prevention (CDC) nearly 49% of adults in Illinois over age 65 reported insufficient physical activity levels which did not meet the recommended levels of 150 minutes/week and (Centers for Disease Control and Prevention, 2011).

In addition to physical activity, another health behavior shown to have a positive impact on the major chronic diseases of aging is diet (King & King, 2010). As individuals age, proper nutrition can help older adults maintain their independence, and improve quality of life (Bandayrel & Wong, 2011). Chronic diseases that are related to diet include Type-2 Diabetes, cardiovascular diseases, cancer and obesity (Amine et al., 2002). In the United States, about

20% of adults aged 65 and over are obese (Flegal, Carroll, Ogden, & Curtin, 2010). In the state of Illinois 21% of adults over 60 have diabetes, 57% have high blood pressure, and approximately 29% of adults age 65 and older are obese (United Health Foundations, 2013), (Illinois Department on Aging, 2013). Obesity can exacerbate the decline in physical function that accompanies aging and can cause frailty, reduced quality of life and higher risk of nursing home placement (Villareal et al., 2011). Of the older adult population in Illinois, only 45% report eating more than two fruits a day and a mere 27% report eating more than three vegetables a day (Healthy Aging Data Portfolio, 2010).

The health impact of an aging population with increasing prevalence of chronic diseases has compelled the public health community and organizations such as the CDC to focus their efforts on preventing disease, disability, and injury among older Americans through lifestyle interventions that help older adults learn about and practice healthy behaviors (The Healthy Aging Research Network Writing Group, 2006). Organizations in addition to the CDC, such as the Administration on Aging (AoA) and National Council on Aging (NCOA) have also emphasized the need for community-based health, prevention, and wellness programs that are grounded in research. These programs are considered evidence-based (EB) and have been proven to increase self-efficacy, decrease health service utilization, and enable participants to adopt healthy self-management behaviors such as increased physical activity and better nutrition. (Administration on Aging, 2012).

Communities at local, regional and national levels have made tremendous progress toward developing and implementing intervention programs that are EB and successful in promoting increased physical activity and better nutrition (Belza, 2007). While there are

numerous EB physical activity and nutrition programs that are approved and promoted at the national level, they have yet to result in a significant reduction in related chronic diseases and conditions (Brownson, Fielding, & Maylahn, 2009). Older adults are still one of the most inactive groups, and tend to have poor nutritional behaviors, sedentary lifestyles and increased resultant chronic conditions (Administration on Aging, 2012; Centers for Disease Control, 2008). Progress has certainly taken place, but the question remains: Are EB programs reaching older adults, especially those who are the most vulnerable due to their race, ethnicity, socioeconomic status, and/or where they live?

The goal of this study is to identify the factors that impact the implementation of EB physical activity, nutrition and/or chronic disease management programs in community senior centers in Illinois. EB wellness programs are operationally defined for this study as any one of the nutrition, physical activity or chronic disease management programs approved by the Administration for Community Living (ACL) (see Appendix A) and/or listed on the NCOA Center for Healthy Aging website (<http://www.ncoa.org/improve-health/center-for-healthy-aging/where-to-find-evidence-based.html>).

This study explored these factors in the context of the theoretical framework of implementation. In its simplest form, implementation means “to carry out, accomplish, produce, complete” (Wildavsky & Pressman, 1973 p. xii). In a broader sense and in relation to this study, implementation can be seen as the “efforts to incorporate a program or practice at the community, agency, or practitioner levels” (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005, p.4).

Implementation research has its roots in theories of diffusion, particularly diffusion of innovations theory. The diffusion of innovations theory was first proposed by Everett Rogers to explain the processes and factors that influence the spread and adoption of new innovations through certain channels over time (Rogers, 1995 & 2003). In the context of this study, the innovation is one or more of the EB programs, as approved by the Administration on Aging and/or listed by the National Council on Aging on their website. Rogers's theory includes several stages in the diffusion process that support implementation including 1) Knowledge, 2) Persuasion, 3) Decision, 4) Implementation, and 5) Confirmation. During the *Knowledge* stage, the decision making unit is exposed to the existence of an innovation and begins to understand how it functions. In the *Persuasion* stage, a favorable or unfavorable attitude about the innovation is formed. The *Decision* stage occurs when the decision-making unit engages in actions that lead to a choice to adopt or reject the innovation. During the *Implementation* stage, the innovation is actually put to use and may be altered to fit the needs of the adopter. Finally, the *Confirmation* stage involves either integrating the innovation into the normal routine of the organization or terminating the use of the innovation.

Current views of implementation are also based on the early work of Pressman & Wildavsky's 1973 study of policy implementation (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). In their book, *Implementation*, Pressman and Wildavsky discuss implementation in terms of policies and programs and state that implementation is "the ability to forge subsequent links in the causal chain so as to obtain the desired results" (Pressman & Wildavsky, 1973, p. xxiii). Pressman and Wildavsky's book was among the first in a growing and developing literature addressing implementation research as it relates to public policy. This research

focuses on the gap between intent (in the case of this study -promotion of EB programs at the national level) and what is put into operation (implementation of EB programs at the community level). Implementation research is of growing importance among funders, researchers, and practitioners as an approach to bridging the gap between science and practice (Meyers, Durlak, & Wandersman, 2012).

The diffusion of innovation theoretical framework guided the major research questions of this study which include:

- How does knowledge of EB nutrition, physical activity, or chronic disease management programs relate to a center implementing or not implementing them to the community?
- What internal and external factors persuade a senior center to implement or not implement an EB nutrition, physical activity, or chronic disease management program?
- What individual, organizational, and contextual factors contribute to the decision on whether or not senior centers decide to implement an EB program?
- What are the facilitators and barriers to the implementation of EB nutrition, physical activity, or chronic disease programs in senior centers?
- What are the factors that contribute to the continuation (confirmation) or termination of implementing an EB nutrition, physical activity, or chronic disease management program?

Importance of the Study

This study addresses a population health issue that has substantial economic implications. Older adults consume a larger proportion of healthcare expenditures than other age groups. For example, adults age 65 and over comprise around 13 percent of the U.S. population in 2002, but consumed 36 percent of total U.S. personal health care expenses (Stanton, 2006). Those older adults who are considered vulnerable due to race, ethnicity, socioeconomic status, and/ or living location utilize even more resources (State of Aging in America, 2007).

Indeed, while there has been more of a focus on dissemination and implementation of EB programs at the national level, there remains much inconsistency within the public health system with respect to the awareness or use of EB programs and strategies to aid in the delivery of health and wellness services and programs. As a result of this gap between evidence and practice, many communities may not be benefitting from research-tested and practice-based strategies that could help them to meet their public health goals more efficiently and effectively (Noonan, Wilson, & Mercer, 2012).

This study will also increase our understanding of factors influencing the dissemination and implementation of policies and practices related to EB programs and preventive care. “Over the past several years researchers and practitioners alike have recognized the need for more research focused on the dissemination and implementation of EB programs to promote health and manage chronic disease” (Emmons, Weiner, Fernandez, & Tu, 2012, p.87). Researchers have also been increasingly interested in understanding policy development and implementation in health promotion. According to the World Health Organization, public

policies can be an ideal tool for the promotion of healthy lifestyles, but this often fails to be the case (Bellew, Schoeppe, Bull & Bauman, 2008).

The research questions in this study can help determine if a gap between policy (the use of EB programs) and implementation exists and what factors can be influenced to effect better dissemination and implementation of policies and practices related to EB programs and preventive care.

Because the purpose of this study is to explore the factors that impact the implementation of EB wellness programs in senior centers the research design selected is primarily qualitative and exploratory in nature. While pre-conceived conclusions were not developed, I did develop the following propositions prior to beginning the study:

- Senior Centers who have boards or patrons who demand programs involving physical activity and/or nutrition will be more likely to have EB programming.
- Senior Centers will indicate that lack of funding and/or staff resources limit or prevent them from offering evidence based programs.
- Senior Centers that have EB programs are responding to external policies.
- Senior Centers who are most successful at implementing EB practices will have close connections with state or national organizations.
- Some senior centers are implementing wellness programs independently that do not align with policies and recommendations at the national level.
- The number of older adults participating in EB programs through the senior centers will be small compared to the number of potential older adults in that service area.

- EB wellness programs are not reaching those vulnerable older adults (such as minorities, those living in rural areas, or have lower socioeconomic status) who are most in need of these types of services.

These and other issues and relationships were explored throughout the study to determine what factors impact the implementation of EB programs in Illinois senior centers.

Chapter 2

LITERATURE REVIEW

This chapter begins with a review of the older adult population and a description of the aging services network which is the primary source of dissemination and implementation of programming targeting older adults in the United States. This chapter will also discuss the implications of an aging population for chronic disease management and how physical activity and nutrition impact the aging process. This section will be followed by a discussion of EB programs to address physical activity, nutrition and chronic disease management. Finally, the last section of this chapter will discuss the implementation process and provide a description of the diffusion of innovations theory.

The Older Adult Population

The number of older adults in the United States is growing at an unprecedented rate due to the aging of the baby boomers and greater life expectancy. The baby boomers, one of the largest cohorts in America and who number approximately 75 million, began turning 65 in 2011, while life expectancy has grown from an average of 47 years in the early 1900s to nearly 79 years presently (National Center for Health Statistics, 2012). It is estimated that by the year 2030, there will be 71 million older adults in the United States, accounting for roughly 20% of the population, or one out of every five Americans (The State of Aging and Health in America Report, 2007). Additionally, the older population is projected to substantially increase its racial and ethnic diversity between 2010 and 2050. By 2050 it is estimated that 42% of the older adult population in the United States will be racially diverse. The percent of Hispanics age 65

and older is projected to be more than double in the next four decades and older Asians are expected to make up 22% of the older adult population (Vincent & Velkoff, 2010). In the past decade, Illinois' older population has grown from 1.9 million to 2.2 million and now represents 13% of the population (United States Census Bureau, 2011). Of the older adult population in Illinois, 20% is comprised of a racial or ethnic minority.

Aging Services Network

In order to understand how formal and informal policies and services reach older adults, it is important to understand the legislation established to serve seniors and the vast aging network that exists to disseminate and implement those services.

The Older Americans Act (OAA) was enacted in 1965 to give older Americans increased opportunities for participating in the benefits of American society (Pub.L. 89–73, 79 Stat. 218, July 14, 1965). The OAA specifies that all older persons are eligible for services regardless of income. Generally, older persons are defined as those individuals who are age 60 and over. The Act contains a set of broad policy objectives aimed at improving the lives of older persons.

These objectives are to assure older persons have:

- An adequate income in retirement;
- The best possible physical and mental health;
- Obtaining and maintaining suitable housing;
- Full restorative services for those who require institutional care;
- Opportunity for employment;
- Retirement in health, honor and dignity;
- Participating and contributing to meaningful activity;

- Efficient community services;
- Immediate benefit from proven research knowledge;
- Freedom, independence and the free exercise of individual initiative;
- Full participation in the planning and operation of community-based services;
- Protection against abuse, neglect and exploitation.

Throughout several decades, important amendments have been added to the Act that have emphasized an increased focus on serving the most vulnerable of older adults including low-income and minority older persons and providing preventive health services.

The OAA was reauthorized by Congress in the fall of 2000 and in the revisions, the Title III-D program was changed from In Home Services to Disease Prevention and Community Services with corresponding programmatic changes. Title III-D funds are currently used for a variety of health related services including chronic disease prevention and health promotion.

The OAA was once again reauthorized by Congress in 2006 for an additional five-year period. The amendments retained the targeted provisions for older adults in greatest economic and social need with special attention to minorities and older individuals residing in rural areas, and added a new focus on older individuals with limited English proficiency. The amendments also focused on EB health promotion and prevention programs.

To develop and implement the variety of OAA services that exist, an aging network was established. The core of this system of federal, state and local agencies and organizations, consists of the U.S. Administration on Aging (AoA), 56 State and Territorial Agencies on Aging (SUAs), 629 Area Agencies on Aging (AAAs), 246 Title VI Native American and Native Hawaiian aging programs, and more than 30,000 community-based organizations. The network is the

infrastructure of the home and community-based long-term services and supports system offering assistance to older adults in the United States (Leadership Council of Aging Organizations, 2011, p. 1).

The Administration on Aging (<http://www.aoa.gov/>) was established under the direction of the Department of Health and Human Services to oversee efforts set out in the legislation designated by the OAA. The Act also mandated that these units divide their states into planning and service areas and to designate Area Agencies on Aging to administer programs for the elderly in those service areas. AAAs are assigned the responsibility of planning, coordinating, developing, and pooling resources to assure the availability and provision of a comprehensive range of services to older adults within their services areas. The Administration on Aging works directly with the State Departments on Aging to provide OAA funding to the AAAs within each state, which in turn, partner with local organizations as providers of service to older adults. The AoA is now part of the Administration for Community Living (ACL). In 2013 the Illinois Department on Aging began working with the Illinois AAAs to incorporate EB health promotion programs into their Area plans. Illinois has 13 AAAs that serve the roughly 2.2 million adults over age 60 in the state. They do this by working with local community organizations to provide an array of services to older adults.

One type of community service organization that AAAs work with is the Senior Center. Senior Centers are community organizations that offer a wide variety of programs and services including meal and nutrition programs, health, wellness and fitness programs, and educational and arts programs. Over 60% of senior centers are designated points of entry for delivery of services that are funded by the OAA. Currently over 1 million older adults are served by close

to 11,000 senior centers (National Council on Aging, 2012). Senior Centers are able to provide services via a variety of funding mechanisms. Many receive federal, state, and/or local government funding. Some charge membership fees or program and event fees. Other sources of funding can include private grants or support from local businesses or community trusts. Because Senior Centers are widely recognized as service providers to older adults and because they are not subject to a sole source of funding or influenced by policy from only one organization, they have been chosen as the community organization for this study.

The National Council on Aging (NCOA) is a nonprofit service and advocacy organization. NCOA works with thousands of organizations across the country to help older adults improve their health, live independently, and remain active in their communities. NCOA established the National Institute of Seniors Centers which provides training, standardization and accreditation options to Senior Centers who voluntarily join and pay a membership fee. According to the NCOA website, approximately two hundred senior centers have been accredited to date. This organization has also partnered with the AoA to promote the use of EB wellness programs for older adults and has served as the AoA's National Technical Assistance and Resource Center for EB Prevention Programs. Their website contains a list of all ACL approved EB wellness and chronic disease prevention programs.

Chronic Diseases and EB Programming

Chronic disease is defined as a disease that has slow progression but lasts for an extended period of time (Booth, Gordon, Carlson, & Hamilton, 2000). Rates of chronic disease in the United States have continued to increase over the past decade and currently 91% of older adults have at least one chronic disease and 73% have at least two (National Council on

Aging, 2012). Persons with a chronic disease or multiple chronic diseases have increased risks of disability, loss of independence, and reduced quality of life, all of which can lead to increased health care costs and decreased productivity; however many of the risks of chronic disease and its accompanying disability and premature mortality are modifiable (Bryant, Altpeter, & Whitelaw, 2006). According to Bryant, et al. (2006) it is important to “intervene effectively whenever we can to modify risks and improve outcomes” (p. 198). Bryant et al. (2006) likewise stressed that it is important to make sure that the interventions and policies we use to improve outcomes have been proven to be effective through research and practice. These types of programs are considered evidence-based.

Increased use of EB programs will increase the likelihood of successfully implementing and evaluating programs and developing successful policies (Brownson, Fielding, & Maylahn, 2009). Yet it is difficult to determine the extent to which EB approaches are being utilized (Brownson, Baker, Leet, Gillespie, & True, 2011). Brownson and colleagues suggest that the public health community is not doing a good job of disseminating EB interventions on a wide-scale and that this needs to be a focus of additional attention at both the state and local levels.

One definition of EB public health is “the process of integrating science-based interventions with community preferences to improve the health of populations” (Kohatsu, Robinson, & Torner, 2004, p.419). The emerging field of EB public health includes individual, group, and policy-level interventions that are intended to have an overall impact that is population-based (Jilcott, Ammerman, Sommers, and Glasgow, 2007). Better dissemination and adoptions of EB public health can have multiple benefits such as access to quality information on proven strategies to improve the health of the public, increased likelihood of

implementation of successful programs and policies, and better use of public and private resources (Brownson et al., 2011). There are barriers to implementing EB public health that can include “the political environment (including lack of political will), and deficits in relevant and timely research, information systems, resources, leadership and the required competencies” (Brownson, 2011, p.4).

While there are many types of EB programs available to serve older adults, for the purpose of this literature review I focused primarily on programs that target physical activity and/or nutrition sometimes independently, or sometimes in combination with other lifestyle changes in chronic disease management programs. A strong association exists between the emergence in chronic diseases and the decrease in physical activity for older adults (Booth, Gordon, Carlson, & Hamilton, 2000; King & King, 2010; Sheppard, Senior, Park, Mockenhaupt, & Chodzko-Zajko, 2003). Likewise, poor nutrition has been associated with negative health outcomes in older adults and decreased quality of life (Bandayrel & Wong, 2011).

The NCOA and AoA have encouraged an evidence- based framework to promote healthy aging. Their framework characterizes EB healthy aging as a process in which the planning, implementation, evaluation, and sustainability of programs, adapted from tested models and/or interventions, should be used in order to address health issues (Whitelaw, 2010). The NCOA Center for Healthy Aging has endorsed several EB programs and includes a list of these programs on their website (See Appendix A). Additionally, with the recent OAA changes to Title IIID funding, the AoA has created a tiered system of criteria for defining EB interventions that will be implemented using OAA funding. The AoA goal for all organizations is to move toward using the highest tier of evidence based programs (Figure 1).

These EB programs vary in scope and cost to those who would like to offer them. Some are offered for free while others require a licensing fee. The EB programs listed by the AoA and on the NCOA Center for Healthy Aging website are not the only EB programs available. The CDC, for example, also endorses several programs. They also provide competitive funding at times for organizations interested in implementing EB programs. All of the endorsed resources are available to organizations that serve older adults and there is also some funding available through competitive grants and Title III-D OAA funds. For the purposes of this project, I focused solely on those programs that are endorsed and listed as ‘top tier’ by the AoA and on the NCOA website. These are included in Appendix A. The criteria used by the AoA to choose their approved EB programs includes requiring programs to be tested in randomized, controlled trials, published in peer-reviewed journals, “show positive results for older adults, and be replicable in the community with fidelity to the original intervention” (Tilly, 2010, p. 23). A complete list of criteria is shown below in Figure 1.

Figure 1: Title III-D Tier Criteria

Highest-level Criteria

- Undergone Experimental or Quasi-Experimental Design; and
- Level at which full translation has occurred in a community site; and
- Level at which dissemination products have been developed and are available to the public.

Figure 1: Title III-D Tier Criteria (cont.)

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|--|
| Intermediate Criteria <ul style="list-style-type: none">• Published in a peer-review journal; and• Proven effective with older adult population, using some form of a control condition (e.g. pre post study, case control design, etc.); and• Some basis in translation for implementation by community level organization |
| Minimal Criteria <ul style="list-style-type: none">• Demonstrated through evaluation to be effective for improving the health and wellbeing or reducing disease, disability and/or injury among older adults; and• Ready for translation, implementation and/or broad dissemination by community-based organizations using appropriately credentialed practitioners. |

One of the physical activity programs listed as 'Highest Tier' is Active Living Every Day.

This EB, behavior change program was developed by The Cooper Institute and Human Kinetics, Inc. to promote increased physical activity. It was later evaluated by the Active for Life initiative which was funded by the Robert Wood Johnson Foundation (Wilcox et al., 2008). The program is group-based and aims to increase physical activity levels in older adults. Elements of this 12-week program include learning activities, online assessments, books, group interaction, and individual guidance. The program includes trained leaders and informational materials, however there is a fee for the training and for individual participant materials (<http://www.activeforlife.org/>) which may be cost-prohibitive in some communities.

Another example of a 'Highest Tier' program is the Chronic Disease Self-Management Program (CDSMP) developed at Stanford University. This program enables participants to take part in maintaining their own health by learning to manage their chronic conditions. The program meets once per week for 2.5 hours, in a group-based format, for 6 weeks. The program uses a train the trainer approach and there is a licensing fee for the training depending on the number of workshops that are offered (<http://patienteducation.stanford.edu/programs/cdsmp.html>).

Although many endorsed EB programs are available at a variety of levels through national organizations, there is no uniform list of all endorsed programs, nor a specific set of guidelines established and accepted by the industry as the standard by which all other programs should follow. Because of this, it is difficult to determine the extent to which community level programs are implementing EB programs and the factors that impact which, if any, programs they choose for their particular organization.

Thus it is important to look at the factors that impact the implementation of EB programs to determine what could be done to expand the use of EB programs at the community level. From a policy standpoint, it is important to know if the aging network is effectively promoting the adoption of EB programming to community level organizations with the potential to serve the most vulnerable of older adults - those that are targeted by the OAA that have low socio-economic status, are of ethnic or racial minority or those living in underserved areas. It is also important to know if community level organizations are adopting physical activity and nutrition programs from other resources. This study will add to the

literature by discovering the factors that impact whether or not the senior centers choose to implement an EB program.

Implementation

Implementation is defined as “the use of strategies to adopt and integrate EB health interventions and change practice patterns within specific settings” (Glasgow et al., 2012, p.1275). *Implementation* is similar to, but different from, research that looks at the effectiveness of an intervention, which is not the focus of this study. Effectiveness research focuses on assessing how an intervention which has been effective in research settings functions in practice (Glasgow et al., 2012).

Current views of implementation emerged from a 1973 analysis study by Pressman & Wildavsky that focused on the examination of policy implementation through a case study in Oakland, California. Although their study was primarily focused on the implementation of a policy, the outcome and discussion in their book, *Implementation*, set the stage for future research into the implementation process. One of the focal points of Pressman and Wildavsky’s analysis is that implementation is an evolutionary process that takes place and often changes over time, and should not be viewed as a final product (Pressman & Wildavsky, 1973). The implementation process can be thought of as assembling numerous program elements that are diverse in nature (Bardach, 1977; Fixen, Naoom, Blasé, Friedman, & Wallace, 2005). Factors such as the organization, the staff, the participants, etc. will always have an influence on the implementation process. Because of this multitude of elements and various players in the implementation process, Bardach suggests that implementation must take into account that there are many special interests who are all pursuing their own goals which may or may not be

compatible with what is intended by the original program or policy mandate. All of these will influence the implementation process (Bardach, 1977). Bardach, 1977, further discussed the give and take between, and within organizations as the innovation is passed along, stressing that the final outcome may not necessarily be what was intended by the original policy or program, and stating: “The nature of implementation process is that it is dispersed rather than concentrated” (Bardach, p. 311).

In their review of literature on implementation research, Fixen, Naoom, Blase, Friedman, and Wallace (2005) pointed out that implementation outcomes were often discussed in a variety of ways by researchers. They suggested that implementation could be categorized in three degrees. The first degree is considered *Paper Implementation* and refers to an organization that has decided to adopt a program and puts the decision on paper in the form of a new policy or procedure within the organization. Having put policies or procedures in a paper format does not necessarily mean that anything will happen with implementation from that point. The second degree of implementation is called *Process Implementation* and means that the organization has gone beyond policies on procedures in written format and has taken steps to put these new policies and procedures in place by offering training to staff, or providing supervision. Although this step can include offering the program, there is often little staff or participant buy-in at this point enough to impact the culture of the organization. Finally, the third degree is *Performance Implementation* which means putting the procedures and processes together, along with appropriate staff training and organizational change, in a way that will benefit the consumers of the product.

In a review of implementation strategies that impact public health programs to reduce teen substance abuse and violence, Elliott and Mihalic, 2004, outlined several items of importance to the success, not effectiveness, of implementation. They suggest that the capacity of the organization to implement a program is important. This includes having the appropriate staff and training them, the consideration of the cost of the program and the training and participant materials, and the ability to sustain the program once funding or technical assistance is no longer available. They also suggest that the adaption or modification of the program by a local organization is nearly unavoidable. This means that it is unlikely that a program will be implemented exactly the same way from organization to organization and is closely in line with Bardach's suggestion that the final outcome may be different than what was intended.

One factor that can have an important impact on implementation is how a program is disseminated. The intent of dissemination "is to spread knowledge and the associated evidence based interventions" (Glasgow et al., 2012, p.1275). After evidence of the success of a health behavior program, usually under tightly controlled circumstances, has been established, the dissemination of the program can take one of several pathways. One way to diffuse programs is by marketing them directly to organizations and another is through policy that encourages the use of EB programs in practice. "The availability of an EB intervention can either lead to or fit within a health-improvement policy" (Owen, Glanz, Salis, Kelder, 2006. p. S39). "Policies can be defined as those laws, regulations, formal and informal rules and understandings that are adopted on a collective basis to guide individual and collective behavior" (Schmid, Pratt, & Howze, 1995, p. 1207).

An example of a formal policy that supports the use of evidence based programs for older adults can be found in recent legislation pertaining to the OAA. “While the aging network has been moving towards EB disease prevention and health promotion programs for the past several years, the FY-2012 Congressional appropriations now require that OAA Title IIID funding be used only for programs and activities which have been demonstrated to be EB.”

(http://www.aoa.gov/AoARoot/AoA_Programs/HPW/Title_IIID/index.aspx)

Title IIID of the OAA was established in 1987. It provides grants to State Departments on Aging based on the number of older adults over age 60. These grants are used for “education and implementation activities that support healthy lifestyles and promote healthy behaviors” (Older Americans Act of 1965). Priority for funding is given to areas that provide services to older adults who live in medically underserved areas of the State or who are of greatest economic need.

According to the website, “Amounts appropriated under Title IIID may be used for grants to States under section 361 of the OAA only for disease prevention and health promotion programs and activities which have been demonstrated through rigorous evaluation to be EB and effective.”

Prior to 2012, EB disease and disability prevention programs (EBDDP) were not required. As a result of this legislation, the AoA began working with the State Units on Aging, who have, in turn, started working with the AAAs to carry out this legislation.

In their 2013-2015 State Plan (http://www.state.il.us/aging/1news_pubs/publications/st-plan_book2013.pdf), the Illinois Department on Aging established a set of priorities for the state including the promotion of

healthy aging options (priority #3) which includes language on the use of EB options.

Additionally, under their Goals, Objectives, Strategies & Performance Measures section, Goal #4, Objective 4.5 Strategies, contains several bullets which include language that encourages the use of EB programs including “Work with Area Agencies on Aging on compliance issues with AoA’s requirement that Title III-D funds must be used for evidence-based health promotion services” (p. 24).

Informal policies and/or collective strategies that encourage and promote, sometimes with funding, the use of EB programs for older adults can be found in a variety of national organizations that represent older adult interests. For example, in 2003, the AoA initiated the EB Prevention Program with the goal of increasing seniors’ access to EB interventions that have proven to be effective in reducing their risk of disease, disability, and injury. The interventions were chosen through collaboration with various science agencies within the Department of Health and Human Services. The intent of the program was to utilize the aging network as a way to put into practice these interventions in community settings (Administration for Community Living, 2009). AoA is the leading organization for this program in conjunction with the CDC, the Agency for Healthcare Research and Quality, Centers for Medicare and Medicaid Services, and several other organizations and private foundations.

Additionally, AoA has partnered with the NCOA to establish the Center for Healthy Aging and has endorsed a set of EB programs on the Center for Healthy Aging website.

In 2004, the Center for Healthy Aging, at the NCOA, introduced a publication series to facilitate the implementation of EB health promotion and disease prevention programs by community based organizations. In the first issue, they state their reason for creating the

publication was because “Current national initiatives encourage the adoption of EB programs— funders increasingly demand that programming be based on solid evidence, agency leaders want to concentrate limited resources on proven programs, and older adults themselves are looking for programs that have been proven to work” (Center for Healthy Aging, 2006, p. 2).

The CDC also promotes the use of EB programs for healthy aging in many ways. Of their funded initiatives, in 2002 the CDC created the Aging States Project which provided funds to a limited number of states to explore collaborations with their local public health departments. In 2004, the CDC continued providing grants for state public health departments and state units on aging to collaborate, but added an additional focus on implementing EB health promotion programs for older adults. More recently, the CDC has partnered with other organizations such as the AoA and NCOA to promote the use of EB programs throughout the aging network. The National Institute on Aging has also established an initiative in partnership with the AoA to support the development of EB interventions, programs, and policies that can be used by community-based organizations.

However, successful dissemination of information about a program or policy does not necessarily mean there will be successful implementation (Fixen, Naoom, Blase, Friedman, & Wallace, 2005). Programs and policies that are proven to be effective through research evidence, often do not easily translate to effective programming within organizations and communities. There is a known gap between knowledge and practice, often referred to as the ‘implementation gap’ (Fixen, Naoom, Blase, Friedman, Wallace, 2005). Efforts to implement programs designed to improve quality of life and health outcomes have not always reached

their full potential due to a variety of challenges found in the implementation process. (Fixen, et al., 2005).

With so many organizations within the aging network adopting both formal and informal policies that support, recommend, and even fund EB programs, a collective atmosphere that promotes and encourages the specific use of EB programs, as opposed to other physical activity and nutrition programs, has been created at both the national and state level. This is a good indication that dissemination of EB programs is occurring at least within the upper tiers of the aging network, however, extensive dissemination and implementation of EB programs must occur more consistently at state and local levels (Brownson, Fielding, Maylahn, 2009). Even with all of the efforts to promote EB programs at the national level through legislative and organizational policies, little is known about whether the programs are reaching the intended audiences.

It is unclear how much organizations in the aging network know about EB programs, whether they are adopting the programs or whether they are implementing them as intended. There is little research when it comes to measuring what factors are involved in a community-level organization's decision to adopt and implement an EB program.

Successes in implementation can occur with the development of strategies that facilitate practice improvements, organizational change, and policy implementation (Glasgow et al., 2012). Yet there is insufficient evidence related to the influence that organizations and policy systems have on the implementation process (Fixen, Naoom, Blase, Friedman, & Wallace, 2005). Fixen et al. (2005) calls for "research that is conducted on outcomes that are independent of the content of the specific practice or program being implemented" (p. 75).

Dissemination and implementation research often goes together and stresses investigating and understanding the processes that are involved in the adoption, implementation, and sustainability of research. (Glasgow et al., 2012).

Diffusion of Innovations Theory

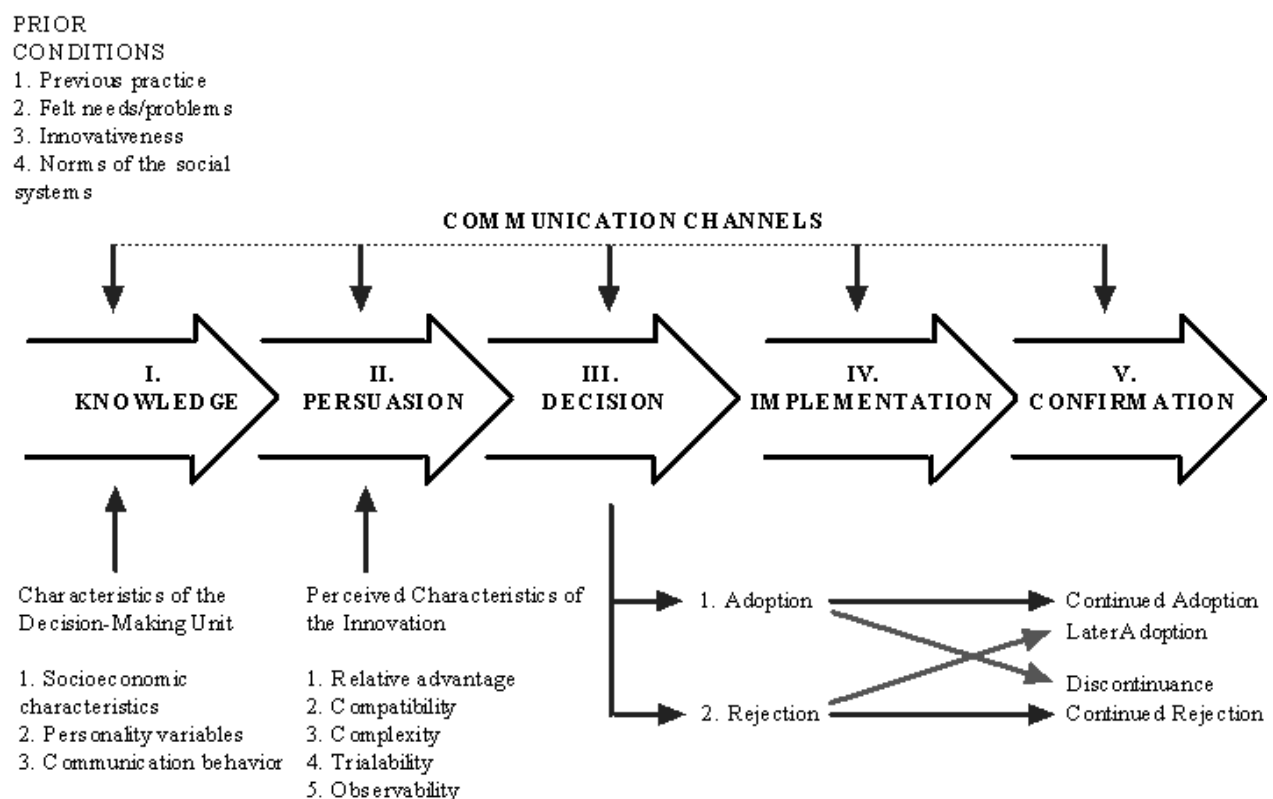
Implementation research can be addressed in the theoretical framework of the diffusion of innovations theory. Diffusion research became well-known in the 1940s and 1950s when various disciplines were interested in studying how new ideas spread and were adopted. Everett Rogers, who was involved in some of the earlier dissemination research related to agriculture, later wrote a book called *Diffusion of Innovations Theory*, which created a theoretical base for how innovations are diffused, adopted, and implemented. Diffusion is defined as “the process in which an innovation is communicated through certain channels over time among the members of a social system” (Rogers, 2003, p. 5). An *innovation* is any idea, program, practice, or policy perceived to be new by the entity that is adopting it (Zaltman, 1973), (Walker, 1969). In the case of this study, the innovation is any of the EB programs as previously mentioned, and listed in Appendix A.

In his series of books, Rogers explains that diffusion of innovations is a type of social change that has four main elements which include innovation, communication channels, takes place over time, and occurs among members of a social system.

Rogers also provides a model of the innovation-decision process (see Figure 2) which consists of several stages that support implementation research: 1) Knowledge, or awareness of an innovation which includes the diffusion or dissemination of information; 2) Persuasion, when the potential adopter forms a positive or negative attitude about the program; 3)

Decision, whether the individual or organization decides to adopt or reject the innovation; 4) Implementation – when the new program is put to use; and 5) Confirmation – seeking reinforcement of an innovation-decision. His model has been used for several decades to analyze how the transfer of programs into practice takes place (Owen, Glanz, Sallis, & Kelder, 2006).

Figure 2: Everett Rogers Diffusion of Innovations Theory (2003), page 171



Although earlier research by Rogers and others primarily focused on individuals, his later work expanded to include diffusion of innovations to organizations. In later work by Rogers, he broadens his theory to include diffusion of innovations in organizations and discusses a stage-model which is influenced by earlier organizational implementation work done by Gerald Zaltman and colleagues. This stage-model somewhat parallels the five-stage innovation-

decision process. Rogers's model includes two broad activities that tend to occur which include *Initiation* and *Implementation*. He then breaks the two activities into a five-stage process, although it is important to note that dissemination and implementation of a program is not necessarily a linear process. It should be viewed as an unfolding practice consisting of stages, but those stages can occur in a variety of orders and can often be cyclical (Zaltman, 1973; Pressman & Wildavsky, 1973).

Initiation consists of activities which include gathering information about an innovation, planning for the adoption of an innovation and any other activities that occur leading up to the decision on whether or not to adopt an innovation. Initiation includes the first two stages of Roger's organizational model which are *Agenda-setting* and *Matching*. *Agenda-setting* refers to the work within the organization regarding the identification of needs or goals which may indicate the need for an innovation. *Matching* is the process of finding the innovation that meets the needs that have been identified. These components closely match Roger's innovation-decision process stages of *Knowledge* and *Persuasion*. The one key difference is that in the case of organizational implementation, the initial phase is generally in response to the organization identifying a need within the organization and realizing there is a gap between what is needed and what is being provided, therefore causing them to search out information to fill the gap and meet the need. *Implementation* consists of the activities which include *Redefining or Restructuring* the innovation to fit the organization; *Clarifying* or more clearly defining the relationship with the innovation, and; *Routinizing* when the innovation becomes an ongoing part of the organization's identity. These later stages reflect Rogers's individual innovation decision process stages of *Decision*, *Implementation*, and *Confirmation*. The

individual and organizational models within the diffusion of innovations theory supply a theoretical background to support *Dissemination* and *Implementation* and provide possible explanations for why an organization may or may not choose to implement an EB program. For example, if implementing an EB wellness program does not fit with an organization's agenda then it may be unlikely that they will choose to pursue this type of programming.

Diffusion of Innovations Theory provides a good theoretical background for using an implementation framework to study the factors that impact whether or not a Senior Center in Illinois will choose to implement an EB wellness program. The stages of Knowledge, Persuasion, Decision, Implementation, and Confirmation provide a context in which implementation can be viewed. Additional research in this area will help advance implementation theory and improve implementation strategies.

Because this research is focused on identifying the factors impacting the decision to implement a selection of EB programs, rather than evaluating the implementation of one particular EB program, I did not choose the RE-AIM framework for this study. RE-AIM is an excellent tool for evaluating dissemination and diffusion efforts related to the reach, efficacy, adoption, implementation and maintenance of an intervention (Glasgow, Vogt, & Boles, 1999). Diffusion of Innovations theory has been utilized for many decades as a way to analyze how the transfer of programs and policies into practice settings takes place (Owen, Glanz, Sallis, & Kelder, 2006). It fit this study better than the RE-AIM framework because this study looked at how national formal and informal policies and practices related to the use of EB programs are perceived by senior centers in Illinois and how much influence they have in promoting the use of EB programs at the community level.

In summary, this section looked at the growing older adult population and the network of aging services providers that has been established from the national to community level to meet the needs of older adults in the United States. Older adults are more likely to have one or more chronic conditions and the increase in older adult population has resulted in an increase in prevalence of chronic diseases. One way to prevent chronic diseases and/or maintain current levels of health for seniors is to utilize EB physical activity, nutrition and chronic disease management programs. Formal and informal policies and practices at the national, state and regional levels have been established to promote the use of EB programs. These efforts could have greater impact if they were more widely utilized by community organizations. Therefore identifying the factors that impact the implementation of EB wellness programs at the community level is important. This study utilized an implementation framework, supported by the diffusion of innovations theory, to explore these factors.

Chapter 3

Methods

The purpose of this study is to identify the factors that impact the implementation of EB nutrition, physical activity, and chronic disease management programs at senior centers in Illinois. The study was guided by the Diffusion of Innovations Theory, a theoretical framework that helps explain the factors (Knowledge, Persuasion, Decision, etc.) that impact the implementation of innovations (Rogers, 2003). The study of implementation focuses on the gap between intent and what is put into operation (Pressman and Wildavsky, 1973). In the case of this study, utilizing an implementation framework will help identify any gaps that may exist in the efforts to incorporate EB programs from national policies and initiatives into practice at the community level and address the following theory-driven questions:

- How does knowledge of EB nutrition, physical activity, or chronic disease management programs relate to a center implementing or not implementing them in the community?
- What internal and external factors persuade a senior center to implement or not implement an EB nutrition, physical activity, or chronic disease management program?
- What individual, organizational, and contextual factors contribute to the decision on whether or not senior centers decide to implement an EB program?
- What are the facilitators and barriers to the implementation of EB nutrition, physical activity, or chronic disease programs in senior centers?

- What are the factors that contribute to the continuation (confirmation) or termination of implementing an EB nutrition, physical activity, or chronic disease management program?

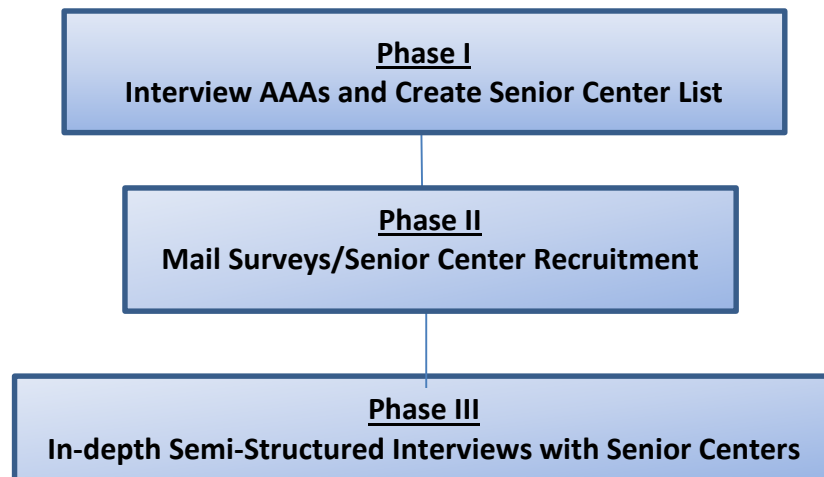
This chapter discusses the methodology used in this study. The following sections include details about the study design, participants and the data collection procedures. Finally, this chapter ends with information regarding the data analysis procedures.

For this study, a three-phase, sequential, mixed method study design using both quantitative and qualitative methods was employed. Mixed methods research involves using both quantitative and qualitative approaches when the combination of the two methods of data collection can provide a more complete understanding than one approach alone (Creswell, 2013). This combination of research designs can be useful in circumstances where the researcher may want to build or elaborate on findings from one method by using another method (Vogt, 2012).

In the case of this study, information about the senior centers was collected using a quantitative survey from which a sub-set of senior centers was chosen to perform in-depth qualitative interviews. Because the main focus of my study was to understand the reasons why senior centers in Illinois may or may not choose to use an EB program, the dominant research method used was a qualitative, in-depth, data gathering technique called a semi-structured interview utilizing an interview guide (Curry, Shield & Wetle, 2006). This method provided a deeper understanding of the factors that affect the adoption and implementation of EB wellness programs.

The three phases of the study are outlined below and will be explained in more detail in the following section (Figure 3).

Figure 3: Phases of Study



Phase I: Within the state of Illinois four areas were chosen based on the way the state is divided into AAAs. Four, in-depth, semi-structured interviews were conducted with the AAA directors to provide information on the programming and funding that passes through their agency and how they determine which programs to promote and fund. I also utilized the agencies to confirm the list of senior centers in their areas and, when appropriate, to provide updated contact information.

Phase II: Surveys were used to gather background information from all senior centers in the four AAAs areas. Survey results were used to identify a sub-set of senior center leaders to interview.

Phase III: In-depth semi-structured interviews were conducted with a sub-set of senior center survey participants. The five stages of the diffusion of innovations theory was used to formulate the interview questions (Appendix B).

Sample

According to the Profile of Aging Americans, adults over the age of 65 represented 13.3% of the U.S. population in 2011. Additionally, of the older adult population in the United States, 21% are comprised of a racial or ethnic minority, 28% live alone, and 8.7% fall below the poverty level. The Census data for Illinois are similar to that of the United States. The percentage of the population of older adults in Illinois was 12.5% in 2010 and of those, 21% of adults over age 60 are from a minority background. Additionally, the Community Survey data in Illinois from 2005-2009 indicates that approximately 8% of older adults fall below the poverty level and 25% live alone.

The state of Illinois is divided into 13 AAAs. See Figure 4 for a map of the service areas in Illinois. As noted in an earlier section of this paper, the AAAs are an integral part of the aging services network both nationally and within Illinois. They are a pass-through organization that provides funding to regional and local organizations via state and federal dollars. While AAAs typically do not provide services directly to older adults, they are well connected to local community organizations that do provide services and therefore are often utilized as a knowledge resource by those organizations.

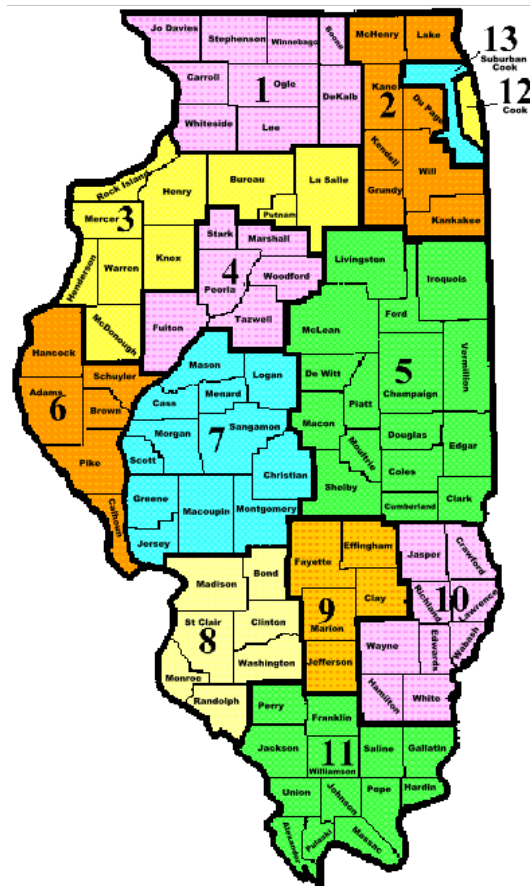
Four AAAs were selected for this study. These agencies included the Northwest Area Agency on Aging (#3), the Mideast Area Agency on Aging (#5), the Southern Area Agency on Aging (#8), and the Midland Area Agency on Aging (#9). These four areas were selected because they have a mix of urban and rural areas, an older adult racial or ethnic minority population of between 5-12%, and include an older adult population with approximately 6-9% poverty rate. This is similar to the statistics for the state of Illinois although the racial/ethnic minority is

somewhat smaller than that of the state. Area Agencies #12 and #13 were considered, however they are based in the Chicago area and represent an urban setting with a 60% ethnic and/or racial minority older adult population and would be unrepresentative of the rest of the state. Other areas were too rural with no urban representation, and there were a few that were similar to the four chosen, therefore offered no reason to choose them over the ones that were selected.

In addition to the four AAAs, 72 senior centers in the four AAA regions were sent a survey. I utilized the Illinois Department on Aging website to identify senior centers in the four areas to be sure that I had a comprehensive list of all senior centers. The survey was addressed to the director of the senior center. Following the mailing of the surveys, a sub-set of twelve senior center directors who returned the surveys were chosen for in-depth, in-person, semi-structured interviews.

Interviews were conducted with the four directors of the AAAs that were chosen. The AAAs have influence on local provider organizations and can play an important role in the dissemination of information to local providers, therefore impacting their decision making. They are especially influential in the *Knowledge, Persuasion, and Decision* making stages of Rogers's diffusion of innovations theory model. Additionally, they were able to confirm or provide alternative contacts for the senior centers in each of their provider areas.

Figure 4: Map of Area Agency on Aging Regions in Illinois



Procedures

Prior to beginning the study, approval was received by the Institutional Review Board at the University of Illinois at Urbana Champaign. The study was carried out in three phases and informed consent was obtained from all participants.

During **Phase I**, the interview guide developed for the interviews with the AAAs was designed using the diffusion of innovations theory and the stages of *Knowledge*, *Persuasion*, *Decision*, *Implementation* and *Confirmation* to guide the questions. For example, a question that was included that would represent the *Knowledge* stage was “Are you aware of any of the EB programs listed on this paper?” and for *Persuasion* - “What factors influence you to choose

these EB programs over other programs that may be available?” The questions, while designed with the five stages in mind, were not specifically categorized by each stage so that the interview would not seem too programmed and discussion and information could flow freely. Next, directors from AAA areas #3, 5, 8 and 9 were contacted and interview appointments were scheduled. The semi-structured in-depth interviews took place at their office and lasted approximately one hour. The interviews included questions that utilized the Diffusion of Innovations Theory stages and were designed to provide a context in which the senior centers in the AAA provider areas included in this study might function. The interviews also helped to ensure that all of the senior centers in their provider areas were included and AAA directors provided updated contacts to some of the centers. Throughout the interviews I employed a method of member-checking where I would repeat back or restate what the subject said to determine if that was what they intended or if they had additional information to add.

During **Phase II** a quantitative survey was used to gather information about the senior centers in the four areas. The surveys asked questions about the centers such as participant demographics and organizational characteristics. The surveys provided important information about the senior centers that helped to determine which sub-set of centers to interview. According to Miles and Huberman (1994), quantitative data can be of benefit to the qualitative study by finding a representative sample (in this case, the sub-set of centers to interview) and locating deviant cases.

First, an e-mail was sent to those organizations for which an e-mail address was available. A link to an online survey which was set up in Survey Monkey was provided. A week later, hard copies of surveys were sent to all senior centers who had not responded

electronically. Follow-up phone calls were conducted to increase the return rate of the surveys and a post-card reminder was sent to those centers who had not responded. Once the surveys were received, they were sorted into the following two categories:

1. Senior Centers offering EB nutrition, physical activity, and/or chronic disease management programs, or a combination of evidence based programs and other exercise programs.
2. Senior Centers offering nutrition, physical activity and/or chronic disease management programs, but not using EB.

During **Phase III** of the study, a sample of senior centers was identified to participate in in-depth, semi-structured interviews. While there is no single generally agreed upon set of rules for sampling, qualitative researchers typically focus in-depth interviews on relatively small samples (Crabtree & Miller, 1999; Patton, 1990). Because I wanted to receive the broadest range of information and perspectives on the subject of implementation of EB programs in the senior centers, I used maximum variation sampling with specific selection criteria to identify twelve senior center directors to interview. In this case, I selectively chose a sub-set of senior centers from both groups (those which are using EB programs or a combination of EB programs and other exercise programs, and those which are providing nutrition and/or exercise programming but are not considered EB) utilizing the following criteria: centers that serve low numbers of participants, centers that serve large numbers of participants, those that represent rural and/or urban areas, centers that serve a racial or ethnic minority population, and those who serve areas with low socioeconomic status as well as those in more wealthy areas.

The original goal of the study was to select at least one center of each group type (with EB and non-EB, and those offering exercise but not EB) from each of the four AAA areas. However, the response rate from one of the areas was small due to limited numbers of senior centers and had only one senior center offering any type of programs other than a meal site. Therefore, that particular area included one senior center interview and the interviews in the other areas were increased so that the final number of interviews totaled 12.

The interview guide that was developed for the semi-structured, in-depth interviews with the senior center directors was again based on the diffusion of innovations theory and the five stages guiding this study. The interview guide (Appendix B) included questions about how senior centers find out about EB programs (Knowledge), what influences them to adopt (or not adopt) an EB program (Persuasion), their intention to try the innovation (Decision), how EB programs are implemented within their facility (Implementation), if measurement outcomes are utilized, and future plans for offering EB programming within their facilities (Confirmation). Interviews took place at the senior center and lasted anywhere from 45 minutes to an hour and a half. The theory-guided interview questions focused on how innovations (in this study, EB programs) are diffused and implemented. It did not focus on the efficacy of implementation. “It is important to know the extent to which a program is effective after it is fully implemented, but to answer that question it is important to learn the extent to which the program was actually implemented” (Patton, 2002, p. 161). Again, throughout the senior center interviews I employed member-checking to confirm the accuracy of the information being collected and enhance the trustworthiness of my findings.

Data Analysis

For Phases I and III of the study, the audio-taped interviews were transcribed and all identifiable information was removed. Thematic analysis using both an inductive and deductive approach was used to code and theme the interviews. Thematic analysis is a method used to analyze and report patterns or findings within data. It provides a useful research tool, which can potentially provide a rich and detailed account of research data (Braun & Clark, 2006). Inductive analysis allows patterns, themes, and categories to emerge from the data (Patton, 2002). Whereas deductive analysis looks at data from an existing framework (Patton, 2002). In practice, the two approaches can be combined and often analysis moves from one that is more exploratory to the other that aims at confirming findings (Patton, 2002). The first step in inductive analysis is to code data and create categories according to reoccurring themes. This process is called open coding (Patton, 2002; Strauss & Corbin, 1998). Each AAA interview was coded independently in an inductive manner by three researchers. Triangulation was used to establish agreement between the coders in order to establish the credibility of the emerging themes. Themes were only considered if an agreement was reached among the researchers about which themes emerged from the participant interviews. The sub-set of interviews from the senior centers was also coded using inductive analysis in the same manner. Once the independent coding was complete, a codebook was created using the codes that were agreed on by all three researchers. Then, a selection of interviews were chosen to be coded completely by two researchers to be certain the coding was being used consistently and to ensure the credibility of the codebook. Following this process, minor clarifications were made to the codebook and the researcher proceeded with coding all 12 interviews using NVivo 10

data analysis software. Once the coding was complete in NVivo, the data was analyzed for recurring themes. The major themes that emerged from the data occurred in at least 11 of the 12 interviews and appeared anywhere from 40-64 times. Three additional themes that emerged in at least 9 - 10 of the interviews and were closely related to three of the major themes will also be included in the discussion in the Results chapter. The major themes were then analyzed deductively by arranging the themes into categories that coincided with Roger's Diffusion of Innovations theory stages and my study questions.

Phase II of the study consisted of quantitative data via a survey. The survey information was entered into a spreadsheet and descriptive statistics were used to describe the data based on mean, standard deviation, and percentage. The surveys were sorted into two groups according to their responses and were utilized to determine which senior centers to interview.

Trustworthiness and Reflexivity

"The foundation of a high-quality study is high-quality data" (Krahwohl, 2009, p.342). In qualitative research, Guba and Lincoln (1982) suggest the term *trustworthiness* is synonymous with the term *scientific rigor* as it is applied to quantitative research. In qualitative research, for a study to address trustworthiness, the following four criteria should be considered:

1. Credibility – the evaluation of whether or not the research findings represent a credible conceptual interpretation of the data.
2. Transferability – the degree to which the findings of this inquiry can apply or transfer beyond the bounds of the project
3. Dependability – an assessment of the quality of the process of data collection, analysis, and theory generation

4. Confirmability – measure of how well the findings are supported by the data collected.

To address credibility I used triangulation in my data collection methods as well as in the analysis of the data by multiple individuals. Additionally, during interviews I used a form of member-checking where I would restate answers back to the interviewees to confirm that I had captured their answer and to explore for any additional information or interpretation of their responses. I also actively searched for data that not only supported but also contradicted my theory.

To address transferability, I have included my data collection questionnaires in Appendix B and have provided rich detail on the methods and data analysis of my study so that it provides other researchers the opportunity to repeat the procedures of this study.

To address the issues of dependability I used triangulation to assure the consistency of coding and theming of the data. I used an in-depth process of independent coding by myself and two peers as well as group sessions where we discussed the data and coding at length and created coding only once there was a consensus. Additionally, once the code book was complete, we once again engaged in independent coding of a sample of interviews to be sure that we were coding consistently. The group reconvened, clarified and updated the code book, and then the entire set of interviews were coded using the new code book.

To address confirmability, I utilized the assistance of my doctoral advisor and two of my committee advisors to assist me throughout the process. I met regularly with my advisor and a committee member to discuss my study and the findings. I utilized a third advisor when I ran

into additional questions about methods or how my results were developing and to explore the influence I may have had as a researcher.

Additionally it is important for the researcher to practice reflexivity or self-reflection. Because it is important to recognize the role of the researcher and any way in which the researcher may unduly influence the data collection or interpretation (Patton, 2002). In qualitative research it is commonly thought that a researcher's values, beliefs and assumptions can influence research and this is likely an inevitable aspect of qualitative research but does not necessarily mean it is a weakness. "Qualitative inquiry, because the human being is the instrument of data collection, requires that the investigator carefully reflect on, deal with, and report potential sources of bias and error" (p. 51, Patton, 2002). Carefully documented procedures, the use of multiple data sources, triangulation, and other techniques are all ways in which high-quality, trustworthy data can be produced. I utilized many of these techniques in my study to avoid any potential sources of error including establishing an atmosphere of trust so that participants felt comfortable. This helped to minimize the influence I may have had over their responses. Additionally, I was open to any information, good or bad, that would provide insight as to why senior centers choose to, or not to, implement an EB wellness program.

Chapter 4

Results

This study yielded in-depth insights into the various factors that impact the use of EB programs in Illinois senior centers. In the following paragraphs, descriptive data about the senior centers who responded to the survey and the sub-set of centers that were chosen for interviews is provided. Following that, results from the qualitative interviews are presented in detail.

Descriptive Data and Demographics:

Of the 72 surveys that were mailed, 5 reported they are no longer operating as a senior center and 6 were returned as undeliverable (they are all from very small towns) and although attempts were made to locate new addresses it was determined that the centers were no longer viable or had merged with another area. Of the remaining 61, 26 were returned with 23 agreeing to participate in the study and 3 declining participation.

Descriptive data of the 23 senior centers who responded are displayed in Table 1. The range of participants reportedly served by the 23 senior centers was from 10 to 3,150 attendees per month. Of the respondents, 27% serve a population that is 100% rural (less than 2,500 residents) and 18% serve a population that is 100% urban (greater than 2,500 residents) with an additional 32% serving a population that was at least 80% urban. The remainder of respondents serves a mixture of rural and urban populations. Additionally, the range of participants served that represent a racial or ethnic minority was from 0% to 40% with an average of 7.72%. Those centers serving participants who qualified as low-income (based on the 2013 Poverty Guidelines for the 48 Contiguous States and the District of Columbia)

reportedly served a range of 1% to 90% low income with an average of 37.7%. This sample of respondents represented centers that were both small and large, served primarily rural or urban populations, had participants that represented a variety of socio-economic backgrounds and included participants that were from a minority background.

Table 1: Responses from all 23 senior centers

| All Senior Center Survey Responses | | | | |
|---|----------------------|--------------|----------------|--------------------|
| | # Respondents | Range | Average | Stand. Dev. |
| Participants Served | 23 | 10.5-3,150 | 711 | 88.65 |
| Racial/Ethnic Minorities Served | 23 | 0-40% | 7.9% | 10.8 |
| Low-income Participants Served | 17 | 1-90% | 37.7% | 26.2 |
| Participants Served in Rural Areas | 23 | 0-100% | 40.9% | 41.5 |

The returned surveys were divided into two categories. Those that were using EB programs or a combination of EB programs and other physical activity, nutrition or chronic disease management programs, and those that were not using EB programs but were engaged in other types of physical activity, nutrition or chronic disease management programs. A sub-set of senior centers from these two groups was then chosen to participate in in-depth, semi-structured interviews. Data for the sub-set of senior centers can be found in Table 2. The range of participants reportedly served by the interviewed senior centers was from 50 to 3,150 attendees per month. Of the respondents, only one center served a population that is 100% rural (less than 2,500 residents) and 1 center served a population that is 100% urban (greater than 2,500 residents). Of the remaining centers, 60% served a population that was at least 80%

urban. The remainder of respondents serves a mixture of rural and urban populations. Additionally, the range of participants served that represent a racial or ethnic minority was from 1% to 30% with an average of 7.6%. Those centers serving participants who qualified as low-income reportedly served a range of 1% to 65% low income with an average of 40%. This sub-sample of respondents represented centers that were both small and large, served primarily rural or urban populations, had participants that represented a variety of socio-economic backgrounds and included participants that were from a minority background.

Table 2: Responses from the sub-set of 12 senior centers interviewed

| Senior Center Survey Responses | | | | |
|---|----------------------|--------------|----------------|--------------------|
| | # Respondents | Range | Average | Stand. Dev. |
| Participants Served | 11* | 50-3,150 | 993 | 1054.15 |
| Racial/Ethnic Minorities Served | 12 | 1-30% | 7.6% | 9.0 |
| Low-income Participants Served | 11* | 1-65% | 40% | 26.1 |
| Participants Served in Rural Areas | 12 | 0-100% | 25.6% | 27.7 |

** Note: One respondent did not answer how many participants they served or how many low income participants attended their facility.*

Of the four AAAs and twelve senior centers that were interviewed, the themes that were identified have been organized in a way that coincides with my research questions which were based on the five stages of Rogers' Diffusion of Innovations Theory.

Knowledge

The Knowledge stage is the first of the five stages and includes when the decision making unit is exposed to the existence of an innovation and begins to understand how it

functions. During this stage, knowledge of the innovation occurs whether it is somehow shared or presented to an organization or the organization itself seeks out information about the innovation (Rogers, 2003).

My research question related to the Knowledge stage was: *How does **knowledge** of EB nutrition, physical activity, or chronic disease management programs relate to a center implementing or not implementing them to the community?*

One way that senior centers can learn about EB programs is through their local AAA. This is certainly not the only way for them to learn about EB programs but because the AAAs are an integral part of the aging network and are the venue in which policies from the national and state level are passed through to communities, I wanted to first learn what the AAAs knew about EB wellness programs. From the interviews with the AAAs and Senior Centers the following themes emerged:

AAAs are Knowledgeable

All of the AAAs interviewed recognized the list of “highest tier” EB programs that had been approved by the Administration for Community Living and that EB programs were also listed on the NCOA website. While the four AAAs interviewed had varying knowledge of all programs on the list, each was familiar with the following three: Chronic Disease Self-Management (CDSMP), Strong for Life (a program no longer listed by the NCOA and AoA but considered reimbursable in their areas), and Matter of Balance. Additionally, Active Living Every Day and Fit for Life were mentioned by three of the four interviewed. All four expressed that they had spent time learning about programs in their areas through research,

presentations, and information they received from other organizations which is reflected in the following quotes:

“We really did thorough research of what we could possibly afford, and what we thought the interest in our area was.” AAA-3

“We started to research what was available that was evidence-based when we were shifting our funds. We talked to some of our other area agencies.”AAA-2

“In 2006, the Illinois Department of Public Health received a CDC grant in the state of Illinois for promoting CDSMP” AAA-1

Interview data indicates that the AAAs are informed about the availability and importance of EB programs. It also shows that AAAs are most knowledgeable about three of the programs and have chosen to promote one or all three of them in their areas, supported by the following quotes:

“For CDSMP... we heard a presentation...and we were convinced that this was a good thing to do. We knew that managed care was on the horizon and thought this would be a good way for us to build bridges with the health care community.” AI-1

“We looked at Matter of Balance, we looked at Strong for Life, and to be quite honest this Strong for Life fits in to our budget better than other program. And it's a nice little exercise program that can be taught to people.”AI-4

Senior Center Knowledge of EB Programs is Limited

Of the senior centers that were interviewed, 25% reported no knowledge of any of the EB programs approved by the ACL and NCOA, 42% were familiar with or had heard of one of the programs listed by those organizations, 25% had heard of only two of the programs and 8%

were familiar with three or more of the programs on the list. Some of the quotes that indicated this are listed below:

“Yes, we are. We also hope to do the Strong for Life and CDSMP, those are coming down somewhere. I don't think I am aware of many (policies about offering programs). One thing I can tell you is that I do what I was told from the area agency. I do rely on them mostly.” SC-5

“No, and nobody has contacted me to try to do anything like that (Continues to look at the list – shakes head no).” SC-10

“Other than Matter of Balance, sorry I do not recognize any of those, and none on that list. It's too bad, they look interesting.” SC-4

“But they don't...this stuff. They don't come down and talk to senior centers. They don't tell senior centers about this stuff unless they want to.” SC-1

“Actually I think I've gotten a couple of emails about it. Chronic Disease Self-Management of course I've heard of that. Matter of Balance, (name removed) has offered that a couple of times I believe.” SC-3

While the AAAs expressed knowledge about EB programs, it was clear that they mainly focused on three programs in their area. Reasons for these choices are discussed in more detail in the Persuasion and Decision stages. As for the senior centers, these quotes taken together underscore that their knowledge of EB programs was limited and, at times, non-existent. Of the senior centers that were aware of EB programs, not one offered a program that was outside of the three main programs promoted by the AAAs in their area.

These findings indicate there is a small gap in the dissemination of the EB programs available on the highest tier and NCOA lists from the national level to the regional (AAA) level.

A much greater gap exists between the dissemination from national level to the community level senior centers. Part of this gap was observed in the difference between knowledge levels at the AAAs and knowledge levels at the senior centers.

Persuasion/Decision:

During the *Persuasion* stage a favorable or unfavorable attitude about the program is formed. Factors that contribute to whether a favorable attitude is formed are the perceived advantage of the innovation, compatibility, ease of use, and any perceived social or material risks. During the *Decision* stage, additional information about the innovation may be gathered and the innovation may be tried on a trial basis to a limited degree. In his book, Rogers (2003) discusses that these two stages may take place in reverse order, or one of the stages may even be eliminated. I have combined the two stages because they were so closely linked during the interviews; it was difficult to determine where persuasion and decision separated.

My research questions related to these areas included *1) What internal and external factors persuade a senior center to implement or not implement an EB nutrition, physical activity, or chronic disease management program, and 2) What individual, organizational, and contextual factors contribute to the decision on whether or not senior centers decide to implement an EB program?*

It is important to understand what programs or policies in the service areas may have had an impact on the senior center decisions. I first interviewed the AAAs to determine how they viewed the priorities for their territories and what was driving their decisions to offer and promote certain programs. Again, because the AAAs are a pass-through organization for policies and programs that are promoted at the national level, I interviewed them to first gain

their perspective on what was happening in their regions. The following themes emerged from both AAA and senior center interviews:

Policy and Community Needs Direct Us

Overall the AAAs reported a favorable attitude towards EB programs. Their reasons for acceptance of the EB programs were overwhelmingly based on a policy directive from the state and/or Administration for Community Living related to the Older Americans Act. This is reflected in the following quotes:

“Well they said we had to do it. You know if you’re gonna spend IILD money it has to be evidence-based.” AAA-2

“The Administration on Aging is now called ACL. That is who influences us most. The department of Illinois told us ‘look, in another year you are going to have to have all of this done, and it’s all gonna have to be evidence-based.” AAA-3

“Again, strategically, we knew this was the direction that area agencies were going, and that the Older Americans Act was going, and the Administration for Community Living was going.” AAA-1

Additionally, they recognized a need in the areas they serve and expressed a desire to meet those needs, as follows:

“Then we took a look at what we thought the needs were and we looked at the needs assessment the public health had done in our area.” AAA-3

“There’s a high, significantly high level of chronic diseases in this area.” AAA-2

In reporting on which EB programs were chosen and why, the most common reasons were related to funding limitations and ease of use.

“The reason for the choice was that it was cost effective.”AAA-4

“Then if I talked a little bit about Strong for Life, the reason why we chose that is it’s because it’s something we could implement everywhere.” AAA-2

“We looked at Matter of Balance, we looked at Strong for Life, and to be quite honest this Strong for Life fits in to our budget better than other program.” AAA-4

During the interviews with the senior centers, many factors were discussed that influenced their decision on whether or not to choose EB programs. However, three themes repeated throughout the interviews that were the most persuasive in whether or not they chose EB programs were 1) lack of perceived interest among their current participants, 2) changing participant demographics and, 3) competition from other sources.

Our Programming is Client-driven

In all twelve of the senior center interviews, the directors made it clear that they chose programming mainly based on the needs and wants of their clients. In cases where the senior center was aware of and utilizing one of the EB programs, it was still important to the center and the success of an EB program that their clients were interested in the programming. This is supported by the following quotes:

“If I think people are interested, I will actually float ideas with different groups, what would you think of attending something like this? Are you interested in this? And sometimes people would say oh yeah! And sometimes is like nah nah nah – they grumble through it. So that’s my number one motivator, they are interested in or they are not. There is no point to offer something that if nobody wants to come.” SC-10

“The exercise group, they already had their own thing. So you know, that didn’t go because they have to buy into it and they didn’t because they liked what they had.” SC-1

“I have the Matter of Balance program and I have people that are trained for that, but it just didn’t go over well in our senior center for some reason. We just couldn’t get participants.” SC-4

“We have in the past had Chronic Disease Self-Management classes here. About 3 years ago when we did our first one, we had attendance of about 16 people. The last time that we offered it we had a very small amount of people, and then people kept kind of dropping out. So we finally ended up with 2 people, so we haven’t offered it for a while.” SC-3

“The other part of that dynamic is we do ask the seniors, “What do you want? Do you want Matter of Balance or do you want Tai Chi?” And they’re all picking Tai Chi, so we’ve continued that even though it’s not funded.” SC-9

“I think it’s good for our seniors, we try to promote, try to get people to come in here. It’s a little bit of exercise, it’s not really straining on them. It’s just get them out, get them move around, but it’s hard to get them here to try it.” SC-12

These quotes taken together underscore that the senior centers recognized the importance of staying active for older adults and many of them expressed the socialization that their clients received from being at the center as of equal importance. But they remained unconvinced, even when they attempted to offer EB programs, that the programs would be or were being perceived positively by their clients. In the case of the EB programs, they did not think they were meeting the interests of their clients. The importance of meeting client

interests is closely related to the next two themes that emerged out of the interview data and are equally as connected.

EB Programs are not Meeting Senior Center Goals of Attracting New Clientele

It became clear from these interviews that the senior centers are struggling with losing clientele and marketing for younger seniors. Trying to meet the goal of offering EB programs, in many instances, did not match up with what the senior center felt would help them continue to be successful, thriving organization. In many cases, the senior center indicated that the current EB programs, that they were familiar with, were more useful in long-term care and assisted living situations rather than a senior center.

“I would like to offer some more maybe evening type things for younger seniors. That’s something down the road that I am hoping to develop.” SC-4

“I see a lot of those programs are maybe more for like an assisted living or nursing home and not for the clientele here.” SC-8

“Your nursing home older adult, your very frail trying to stay in their home, and your victim of abuse and neglect. That’s who we’re used to working with. That’s probably more of the Matter of Balance crowd from my understanding. And the Tai Chi is our active seniors that want to do Tai Chi at the center. That’s what the center is for. They have the space to do those things.” SC-9

“So it’s really up to the senior center to develop that, and you have mind set of a lot of these folks that are a certain age they just can’t change.” SC-2

“We have a lot of people telling us that they don’t wanna come in to the senior center, it sounds like it’s for old people.” SC-12

“That's why I think they are having success, the way I'm hearing it, at the assisted livings. Because those people are there. It's not any kind of a problem for them to attend those classes because that's where they live.” SC-1

“Not only are they (EB Programs) behind they're targeting people who are more impaired with less ability.” SC-2

“We are actually thinking about being open in the evening, because we realize that our senior is staying and working longer, and lots of activities they can't get during the day. And we are trying to figure out how to support being open.” SC-4

“It just get taking over by fast movement things, like Zumba, Zumba gold and... I think that seniors – you know how they say 50 is the new 40 and so on, I just think they are younger and more active than they used to be. That's what I see. Maybe back in the day they wouldn't think to attempt things like that but now they don't even think twice about it.” SC-8

These quotes taken together highlight that an unintended consequence of the policy to provide funding only to the highest tier EB programs, is that it is forcing senior centers to choose between offering more active programming, that may target the younger-old, and receiving continued funding for their programs. They feel they need to give up some of the programming they are offering in order to receive funding to offer a more sedentary program.

Everyone Wants a Piece of the Senior Market

In addition to the struggles the senior centers voiced about declining clientele and targeting the young-old demographic, they discussed at length the feeling that they were also facing competition from a growing senior marketplace. The quotes below show the availability of exercise classes and/or facilities in the same areas of the senior centers.

"They have other places to go. And they've got the facilities. We're not. That's not what we do. We can't compete with the Y anyway." SC-1

"What they are going to do is start offering all these wellness programs because they know that's the primary way of addressing the medical issues... And in 5-10 years the YMCAs, hospitals, I've been saying that for years, the hospitals will all have senior centers." SC-2

"Our local health department offers they have some walking, and they have a senior exercise program and then so does our local therapy department through the hospital." SC-7

"So they were participating in that (Silver Sneakers) through the Y down there as well, and also our hospital does offer things like Zumba." SC-4

"They have a walking track, gym, exercise equipment, swimming pool. They do have classes." SC-5

"There's a gym. They have one over here at the community center as well. There's a private gym, (name removed). So yah, there are options, and we're close to a Y." SC-11

While increasing the options that older adults have to be physically active is not necessarily a bad thing, the increased competition is a legitimate concern for the senior centers in this study. As already discussed in the previous theme, senior centers do not feel that the EB programs that they are being asked to promote will help them attract new clientele. Those thoughts, in combination with the above quotes reflecting the concern senior centers have of increased competition, puts even more pressure on the senior centers to be innovative with their programming.

Funding is Limiting

Additionally and not surprising, in response to the question asking what would influence the center to offer more EB programs the most prominent theme that emerged is related to the availability of funding. Through the interviews with senior center leaders it was clear that either funding was not needed, not available or reliable, or in some cases, even if it was available, it was not enough to be a sufficient motivator.

The quotes below underscore that funding, while indeed an issue, was an issue for varying reasons. In some cases, senior centers were unsure of the stability of the funding for the programming which made it more of a disincentive than an incentive.

“They put all that on hold because they’re not sure what’s happening with the budget. So this is the first year that we did CDSMP and Strong for Life, and we don’t know if that’s going to continue next year.” SC-2

In other cases, the center felt like they would need to put more of their own funds into the program than they were receiving, as follows:

“Obviously financial. It all costs money to provide programs and if you have extended hours-which most people anymore are still working at 60 – so you have to offer programs outside of normal work hours. And again, that takes money to pay staff to be open here.” SC-4

“I mean our local (name removed) sponsored us to buy the bands for the Strong for Life. Because we do not have the funding to cover all of that. Any type of equipment.” SC-12

“This all kind of came out over a year ago. Where the AAA was changing what they were funding. It had to be an evidence-based program to get the funding, but they were only

going to offer this one. It was like why would we spend 1500 dollars to get 800 dollars in funding?” SC-9

In few cases, the center director did not feel influenced to offer an evidence based program at all.

“That was something we wanted to do, but the reality of the situation is funding.” SC-5

“Well, funding is always a big thing. I know there have been agencies and senior centers that have closed because they were getting state funding and they’re not getting that funding anymore. They can’t keep their doors open which is really a sad thing, but I would imagine funding is the big issue.” SC-3

“It’s never been a lot of money either so that narrows the field.” SC-1

“I also don’t have to do any fund raising here, I am 100% funded by (name removed). Since I do get my funding, those dollars that are available are so small that I don’t even pursue those sort of things.” SC-10

Another interesting position is that there is a lot of effort going into the policies and initiatives behind offering these types of programs but the centers do not feel that the money is backing the initiative which may be hurting the perception of how important these programs really are.

“Funding is the largest barrier and philosophy - something to sit behind that philosophy. I learned this once at a conference 25 years ago and I’ve never forgot it: You want to see the philosophy of an organization, look at their budget. You want to see the philosophy of the federal initiatives, look at the budget. Yes, Title IIID funds evidence-based, but really look at how much they are funding. It’s not funding the philosophy.” SC-9

During the persuasion and decision stages, factors such as availability of funding, perceived competition in the local area and non-acceptance of the innovation by center participants were all factors in limiting the senior centers from choosing EB programs, or in some cases continuing or expanding on EB programs. Although the AAAs are very influenced by national policies related to EB programs and informal policies promoting the importance of using EB programs, the senior centers had little awareness of or did not take into consideration policies related to EB programs, whether they were formal or informal, regional, state or national. The exception to this was in cases where senior centers were required, via contract, to offer an EB program in their area. Although this requirement was policy-related, it had little impact on the number of people who actually attended the programs and/or the effort the center put into attracting patrons to the programs. Additionally, while AAAs mentioned Title IIID funding initiatives as an incentive, senior centers reported lack of funding, not the possibility of funding, as a persuasive factor. Therefore, either the funding is not available to the senior centers or the funding that is available is not significant enough to make an impact, or as reported, the senior centers are not even aware it exists.

Implementation

During the Implementation stage, the innovation is actually put to use and may be altered to fit the needs of the adopter (Rogers, 2002). The research question that is related to the implementation stage is: *What are the facilitators and barriers to the implementation of EB nutrition, physical activity, or chronic disease programs in senior centers?* In this stage, implementation of a program is already occurring and seeks to determine those variables that are impacting the implementation of a program positively or negatively.

Concern for Program Inflexibility Exists

For those senior centers that were using EB programs there were no reports of altering the program to fit their facility/participants. However, throughout the interviews with both the AAAs and the senior centers, an overall concern regarding the complexity and length of the CDSMP became evident. Additional complaints about the inflexibility of the programs and program requirements can be found in 9 out of 12 interviews. It is important to note that this number is slightly lower because not all senior centers were aware of, or offering EB programs. In this instance, AAA and senior center responses have been combined as follows:

"We do have feedback from people doing CDSMP is that they wish it would focus on one thing." AAA-3

"You have to be trained by a Master Trainer, it's hard to find a Master Trainer, you have to have the book and then they can't train without the book, and there's a cost for each book." AAA-2

"Also we are finding the length of the program is problematic especially with people with chronic diseases, the length of it and how many times they have to come in... but it's the length of the program itself that people complain about." SC-5

"Chronic Disease is the driest, boringest stuff out there. Grab people and say for six weeks you are going to be here for two hours learning something out of a book. What I can't understand with this is why in the world didn't they put in a physical piece in like some kind of exercise routine?" SC-2

"There are just too many things that the programs want you to do to be able to have that. I just don't want to have to fill out paperwork and stuff to be able to offer it here and a lot

of times it seems like in the past there were often certain requirements you have to fulfill in order to have those programs.” SC-8

“The problem with Strong for Life is that although it is technically supported by Stanford University, there is no further development – no new DVDs coming out, so there is no variety to the program so participants who engage in the program get bored with it after a while.” AI-1

“The girl who does that thinks that is a lot of the issues- that people don't wanna fill out the paper and get to the doctors to have them. I think that's why we can't get more people here to participate in it.” SC-12

“I'm not sure what they'll think about this new program. They do have to get doctor's consent to do this program which they've never had to do before, and I wonder how willing they're going to be to mess with that. You know what I mean?” SC-7

“The biggest problem I had was people didn't want to make a special visit to their doctor to get the medical release. Then the first thing I see on Active Choices - Facilitator training and certification, 8 hours minimum workshop, completion and submission of 3 sample sessions, training trainers available. All these things!” SC-11

While these quotes taken together underscore the difficulties and frustrations the senior centers expressed about implementing the various programs, it is important to note that regardless of the comments related to CDSMP or the other EB programs, the statements were not accompanied by indications to quit offering the program. The comments do, however, provide question as to whether or not the programs will be successful long-term.

Confirmation

The *confirmation* stage involves the decision by the organization to either integrate the innovation into their normal routine or terminate the use of the innovation. The research question related to this stage is: *What are the factors that contribute to the continuation or termination of implementing an EB nutrition, physical activity, or chronic disease management program?*

While the interviews with the AAAs provided little information directly related to the senior center's choice on whether or not to keep offering an EB program, they did provide some context as to whether or not the AAAs would continue to promote EB programs within the areas that the senior centers operate. In this case, the prominent themes that emerged from the interviews with the AAAs include 1) the belief that the programs are making a difference for older adults, 2) this will be a continued policy directive from the Older Americans Act through the ACL and state departments on aging, and 3) successful and creative partnerships are going to be the way to disseminate the programs. These themes are discussed below:

EB Programs Work

While the AAAs are not traditionally direct service provider organizations, they reported receiving good feedback from the programs that were taking place in their areas. It is important to note, however, that the AAAs are not only partnering with senior centers, they are utilizing other organizations as well and in some cases, providing trainers to help implement the programs. Feedback from the AAAs regarding their feelings towards EB programs are as follows:

“And really the falls, the prevention one was the best one, and we have had such good feedback on that program.” AAA-3

“So I thought it was very worthwhile, and wellness programs are the way of the future, especially evidence-based wellness programs.” AAA-3

“Part of the reason we chose CDSMP is that we already had trainers and it’s been very effective, really effective.” AAA-2

“You want the money you’re spending to be worthwhile and it is taxpayer dollars right? Something that’s making an impact and these programs are which is really great.” AAA-2

“Strong for Life is a nice little exercise program that can be taught to people and that can be beneficial for balance.” AAA-4

These quotes underscore the feeling the AAAs have towards using EB programs. They express their belief that the programs are effective and have had positive feedback from their areas. Furthermore, the AAAs feel like this is something that will continue to be a priority within the aging network.

Policy Will Continue to Direct Us

“Title IIID is the biggest incentive, and we are hopeful....that more money will be put into IIID.” AI-3

“Any AAA has to think about how they will sustain the program through ongoing training and fidelity monitoring.” AI-1

“I know it's the push, I know it's the older Americans Act, that there is more emphasis put on the evidence base.” AI-4

“If you see our area plan for fiscal year 2015 and our requests for proposals, because we have embraced evidence-based healthy aging programs as one of those overarching commitments or outcomes that we want to achieve...” AI-1

These quotes taken together underscore the belief that the efforts to spread the use and adoption of EB programs will continue to be a top-down directive from the national organizations and remain a priority within the Older Americans Act in relation to Title IIID funding.

We Must Partner Strategically

During the interviews, the AAAs discussed the importance of choosing partners that could contribute to the efforts of increasing the use of EB programs. In many cases, they have chosen those organizations that had the capacity to take on offering these types of programs and were invested in the effort. Additionally they looked for those who could contribute Resources, such as space or staff members, to their efforts. There were no AAAs interviewed that chose to only utilize one type of partner in these efforts. The following quotes reflect their thoughts behind choosing partners:

“The downside is we can’t incentivize those local partners by providing them with funds. So we are looking into those local sites to provide free space, promotion, sources of candidates for training, participants. So churches, senior living facilities, senior centers, nutrition sites, could all be potential locations where CDSMP could be offered or where participants could be included.” AAA-1

“That is where our congregate sites are. We think that's the place to go to try to help with balance and prevent falls. So that's kind of our rationale now. Like I said, they already have

activities, many of them have activities that are going on already. So we figure this might be something that added to their programs.” AAA-4

“It’s a matter of how well you know your community. So it hasn’t necessarily been in senior centers that they are doing CDSMP... and the Faith in Action program has been strictly working with the churches.” AAA-2

“The reason why we chose those four is they all served in areas where a large population centered for the program and they also were organizations that had a large enough staff capacity to take on additional programs.” AAA-1

These responses from the AAAs show the various partnerships that they have pursued to extend the reach of their EB programs. While they all have different strategies behind the types of partnerships that they chose, the quotes underscore the use of creative partnerships and shared resources.

The interviews with the senior centers produced few consistent perspectives within the confirmation stage. For the senior centers that were offering evidence-based programs, it was difficult to determine what would continue to influence them to offer the program. Some senior centers indicated they would be willing to try evidence based programs with additional knowledge and resources (financial and/or training), others indicated that as long as the AAAs were continuing to provide the program through trainers that were sent to their center, they would continue to offer the program. The remaining centers were not offering EB programs but were offering other types of exercise programs that they were firm in their commitment to continue and expand.

Are EB Programs Really Working?

While no themes emerged on confirmation of continuing the program, one potential theme emerged that is worth exploring. For the programs using, or familiar with, EB programs, there is much ambiguity in whether or not these programs are viewed as having successful outcomes although many centers made positive comments about the need for these types of programs.

"A Matter of Balance is a great program, but I think at the same time you could probably get a good Tai Chi instructor that could accomplish some of the same things." SC-1

"We do offer a Strong for Life senior fitness programwe have noticed that in the last several months our Strong for Life has really diminished quite a bit." SC-3

"I believe in evidence based programs. I like that philosophy. The AAA says they get really good feedback and people like it." SC-9

"The ladies that went liked it but they also felt they got just as much from this and decided not to drive there and they are back here now." SC-10

"Well, I think we want our seniors to have better health and continue to live longer, and as that population becomes the largest population, of course, we need to serve them." SC-7

"This evidence-based stuff is just, here's your post-test, how do you feel, X, Y, Z. Whatever. After the end of it, do you feel better? Are you stronger? Can you do more? So it's just self-reporting. When people say evidence-based, they are not even gathering data. That's what kills me. Chronic Disease, all this, it's just a pre and post test." SC-1

"Yah, just seeing that people are maintaining and mobile and happy. That does a lot." SC-12

This set of responses highlights that senior centers are not fully convinced that EB programs are working for seniors. The comments from the senior centers about the importance of healthy aging programs is promising but the ambiguity of the centers regarding the efficacy of EB programs is an area that should be explored.

In conclusion, the interviews with both the AAAs and Senior Centers revealed much about the factors that impact the implementation of physical activity, nutrition and chronic disease management programs in Illinois senior centers. Important themes that emerged include:

- Knowledge of EB programs is limited
- Funding is a concern for both AAAs and Senior Centers
- Senior centers programming is strongly influenced by the needs/preferences of their clientele.
- Senior centers need to balance the preferences of current clients and funders while finding new ways to attract younger seniors. Additionally, they need to do this within an increasingly competitive marketplace.
- There needs to be more options for EB programs that are flexible in their implementation.
- AAAs are firm in their commitment to the promotion of EB programs and will advocate for more funding and continue to create strategic partnerships in their areas in order to increase their implementation.

Chapter 5

Discussion

The purpose of this study was to determine the factors that impact the implementation of EB wellness programs in Illinois senior centers. This study utilized an implementation framework that was guided by the five stages of the Diffusion of Innovations theory which include: *Knowledge, Persuasion, Decision, Implementation, and Confirmation* (Rogers, 2003). A three-phase, mixed methods, research design using both quantitative and qualitative methods was utilized. Four regions in the state of Illinois were selected to include in the study. In-depth, semi-structured interviews were conducted with four AAA directors during Phase I, twenty-three senior centers participated in surveys during Phase II, and twelve senior center directors were interviewed during Phase III.

This study was undertaken because there has been an increasing focus on dissemination and implementation of EB physical activity and nutrition programs at the national level. This is evidenced by recent OAA policies requiring the use of only EB programs in order to receive Title IIID funding and also by the promotion of EB programs as a nation-wide initiative through national organizations such as the NCOA and the CDC. Because older adults are at high risk for developing chronic illnesses and related disabilities, encouraging older adults to be more active and practice good nutrition has become a national health priority (Belza, 2007; Healthy People 2020, Chodzko-Zajko et al., 2009; Center for Healthy Aging, 2006). Many programs have been identified, through research, as being effective at helping older adults increase activity levels, practice better nutrition habits and prevent or manage one or more chronic diseases (Center

for Healthy Aging, 2006; Belza, 2007; Administration on Aging, 2012). While the use of EB programs has been recommended and promoted at the national, state and community levels, there remains a gap between evidence and practice. Many communities are still not benefitting from EB strategies that could help them to meet their public health goals (Noonan et al., 2012).

Some research has taken place in recent years in regards to the implementation of a particular physical activity, nutrition or chronic disease management EB program in community settings (Bandayrel & Wong, 2011; Nolte, & Osborne, 2013; Wilcox et al., 2006). Additional studies have looked into the effectiveness of the implementation of a certain EB program on a larger scale in multiple community sites and across the nation (Ory et al., 2013; Hughes et al., 2009). These studies support the use of EB programs on a broad scale to address chronic disease prevention in older adults.

Despite the fact that the 1978 amendments to the OAA stress that senior centers should serve as the main focal point for service delivery to seniors and over 1 million older adults are served by senior centers, no research could be found that looks at why a particular organization, such as a senior center, would choose (or not) an EB program in the first place (Markwood, 2013; National Council on Aging, 2012). Additionally, no research can be found that looks at the overall impact of the recent OAA policy language to include only EB programs in their Title IIID funding, nor the efforts of the NCOA to nationally promote the EB programs on the 'approved' list at the community level. Without looking at the entire process from the national level to the community level there is no clear picture of how and why community level organizations are choosing to use EB programs.

This study set out to determine why community agencies such as senior centers have or have not chosen to implement EB physical activity, nutrition or chronic disease self-management programs. The interviews with the AAAs provided some context for the area where the senior centers are located. The AAA interviews also provided some information regarding how policies and program promotion is passed along from national organizations, through state agencies and down to the community level. The interviews with the senior centers provided in-depth data regarding the factors that impacted their decision making related to their use of EB programming.

The results of the interviews indicate there is a clear gap in the diffusion of knowledge of EB programs. While information about the approved EB programs for this study is available via the ACL website and the NCOA website, AAAs in the state of Illinois are primarily focusing on three programs due to ease of use, directives from leaders in their network and limited resources. All of the AAAs interviewed had some knowledge of a majority of the programs on the list, however they were most familiar with the three programs which include Chronic Disease Self-Management, A Matter of Balance, and Strong for Life. Senior centers reported a much greater lack of knowledge of EB programs. Some recognized one or more of the three being promoted by the AAAs in the area but most had little or no knowledge of the additional available programs and few were aware of any existing initiatives and/or incentives to offer EB programs.

Because senior centers received their information from a variety of sources (not just AAAs) it would be worth exploring better ways to disseminate information about EB programs that would reach senior centers at the community level. While it became clear during the

interviews that AAAs are working with a wide variety of agencies to implement their programs, senior centers are still an integral part of the aging network and one of the only direct service providers exclusively to older adults. Regardless if senior centers are the partnering organization for the AAAs on program implementation, information needs to reach the centers so they are aware of the importance of using EB programs and the availability of resources to do so. Knowledge is an important part of the implementation framework. In his book, Rogers (2003), discussed knowledge in stages. The first, being awareness-knowledge which simply means that an individual or organization must be aware of or have knowledge of the existence of an innovation. This awareness stage closely relates to the results of the current study where seven of the organizations did not have any awareness of programs. Additional knowledge stages include learning more about the program and its principles. Rogers states that efforts should not only focus on the first awareness-knowledge but should extend to include information on how a particular innovation works and why it is beneficial so that organizations can make informed decisions. These last two stages of knowledge are important because in the current study many of the senior centers that had some knowledge of EB programs, still were not informed enough to know the importance of EB programs or the choices of EB programs available to make informed decisions. Similarly, Green et al. 2009, found that organizations lack access to information about effective practices. They also discussed that even with initial knowledge of an innovation, organizations often become aware of best practices in unplanned or unstructured ways and "Information about any one intervention is often unwieldy, partial or incomplete" (p.23). Lack of knowledge about an innovation can be a stopping point in the implementation process, and in this case it was the stopping point for seven of the twenty-

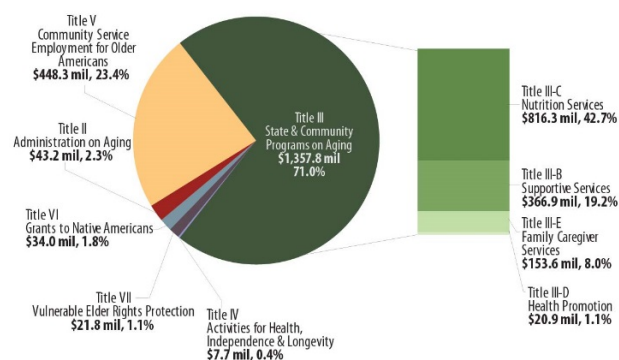
three organizations that responded to the survey for offering any type of EB program, and was a limiting factor for the remainder of the senior center respondents.

Of the internal and external factors that persuaded centers to decide whether or not to adopt a program it was no surprise that funding resources was a prominent theme. As the older adult population rises rapidly, public funding, which is the primary source of support for a majority of senior center services, has remained static and in some cases decreased. In addition, because of economic concerns in recent years, government and philanthropic support has also diminished substantially (Pardasani & Goldkind, 2012). The results of this study concur with a recent study that was conducted at the community level, with local health departments, that found funding was an external barrier to the use of EB decision making (Sosnowy, Weiss, Maylahn, Pirani, & Katagiri, 2013).

Funding was the only similar theme in this study that carried over from the AAAs to the senior centers. Still, there was a difference in how funding was perceived by the AAAs and the senior centers. To the AAAs, offering EB programs was a directive from the OAA and the funding received from the OAA was an incentive to offer EB programs. Many AAAs used not only Title IIID funding to promote EB programs, but also took advantage of demonstration grants and additional funding opportunities for the promotion of the Chronic Disease Self-Management program. Some AAAs have paid for trainers to go into centers and other locations to do the programs, others have provided support for various organizations to have their personnel trained. Regardless of the method, all AAAs that were interviewed regarded the funding positively. The senior center interviews, on the other hand, indicated much ambiguity related to funding. Some senior centers were not incentivized by the funding because they felt

it was too little or would cost them more in the long run than what they actually received. Others felt they had to give up programs they wanted to offer just to have Title IIID funding and therefore did not have positive feelings. Still, there were a few centers that would not be offering EB programs if it were not for the funding or training resources they receive and would be incentivized to offer more with additional funding. This is important because OAA funding allocated to health promotion programs is very small. The budget for fiscal year 2013 shows just barely over 1% of allocations were dedicated to health promotion programs (Napili & Colello, 2013) (Figure 5).

Figure 5: Older Americans Act, FY2012 Funding
(As a percentage of total OAA funding, \$1.913 billion)



A report on the assessment of OAA Title III-D funding suggests that although the funding that is currently available does appear to be working as a catalyst to broaden the range of health promotion and disease prevention activities, lack of funding remains the principal constraint on health promotion and disease prevention activities. Additionally, although the Older Americans Act is intended to only provide seed money for these types of programs, state and area agencies have had difficulty leveraging other funding for health promotion and disease prevention activities. Even when they are able to leverage funding from other sources,

not being able to sustain that funding is an obstacle to continuing programs once they are initiated (Wiener et al., 2006).

In addition to funding, AAAs are clearly motivated by directives from the OAA and from projected needs within their areas. Although senior centers did not report motivation from OAA or other national policy or programming directives, an important finding from the interviews was that centers plan their programming based on their clientele needs and interests. This finding supports the findings from a recent study by Casteel, Nocera, & Runyan (2014) who found that 51% of the senior centers in their study listed “interest expressed by the older adult clientele” as the most important factor when choosing programs. This is important because many of the senior centers indicated that their clients were happy with current programming and did not wish to change or had previously tried an EB program and did not wish to continue it. Those senior centers who were offering an EB program often offered additional exercise programs that had been ongoing in their center or that clientele had requested such as Zumba or Tai Chi. While this study did uncover a wide variety of programs being offered by the centers, it is often difficult for senior centers to prove that their wellness programs are effective and make measurable, positive differences for their patrons (Bryant, Altpeter, & Whitelaw, 2006). Bryant et al. (2006) also asserted that just because clients enjoy a program does not mean that it truly benefits them and also that it is important to know that the program does not cause harm or waste resources that are already limited.

A way to address this concern and increase the use of EB programs may be to educate and market to older adults directly rather than just the senior centers so that clientele requests drive the use of EB programming. Fitzpatrick and McCabe (2008), suggest that information and

education is needed to help older adults stay informed about the health benefits of senior center programs. Educating older adults, and also those who have influence on older adults such as physicians and other healthcare providers, regarding the importance of EB programs could increase the demand for these types of programs. Older adults may benefit from information provided by their physicians or other health care providers on the benefits and availability of wellness programs such as increased physical activity (Bethancourt, Rosenberg, Beatty, & Arterburn (2014). In addition to being a source of funding, the aging network could take an active role in educating physicians and other health care providers about EB programs and their importance to older adults. According to Blumberg, Berger, Cook, & Ruby (2012-13) AAAs, in particular, could help community organizations by reaching out to the medical community to establish partnerships and collaborations.

Additional themes that came from the senior center interviews that were unexpected and of interest, were both perceived as barriers and include: the changing demographics of clients and the competition for the senior market. Senior centers and other organizations who serve older adults have long been facing a demographic change as the baby boomers enter the 65+ age group, and have struggled with decreasing participation (Pardasani, 2010; Walker, Bisbee, Porter, & Flanders, 2004). Centers have concerns that the baby boomer seniors are not utilizing their services (Pardasani, 2010). From the surveys and senior center interviews it became clear that some senior centers in Illinois were closing and others were struggling with serving a population that was becoming increasingly diverse in their needs and preferences. While this was not surprising, what is worth noting is that senior centers did not find that the currently available, highest tier EB programs, were able to help them attract new clientele.

Many comments from the interviews indicated that even their older clients were interested in more innovative or challenging programs such as Tai Chi, Zumba, Yoga, and exercise machines and weights. The centers recognized the need for physical activity and nutrition programs and that there was a place for the current list of EB programs but there was ambivalence about how useful these EB programs are. With the exception of the CDSMP, many thought they were too basic to be effective for their clientele and that they were better for people who were already in residential settings. In regard to CDSMP, they felt it was too long, boring and contained no exercise component. While senior centers recognize the need to focus on their older, frailer, participants, they also must now balance ways to attract the aging baby boomer population while continuing to provide services that promote healthy independent living for the older generations of adults (Pardasani & Thompson, 2012; Markwood, 2013-14). This has been recognized by the National Institute of Senior Centers and many state and communities have documented this through needs assessments and studies as well (Markwood, 2013-14). Some studies have suggested that senior centers are well established and trusted as service-providers to older adults but are in need of a makeover and that increasing their scope of programs to include those for both older and frailer adults is needed if they are to continue to be a main service provider in the senior marketplace (Casteel et al., 2014; Markwood, 2013-14; Fitzpatrick & McCabe, 2008). Because Title IIID funding is now directed only for those programs at the highest tier level, many centers lost funding for programs that were more active and exciting for their patrons. This has made them choose to utilize their limited resources to offer programs that are more restricted. This is a very important finding that supports the need for research and approval of additional EB programs that offer a more rigorous exercise

component which could easily help senior centers meet the needs of their current and future clientele by providing a variety of levels of activity.

The concern about changing demographics is closely related to another barrier that senior centers reported regarding competition in the senior market place. Many places like local YMCAs, YWCAs and other fitness centers as well as hospitals and parks and recreation departments are increasingly targeting the older adult market. Take, for example, a Medicare Advantage, healthcare plan-sponsored program called Silver Sneakers which provides free health memberships to members. Silver Sneakers programs are offered through a variety of health and fitness centers and are showing promising results not only for users but as a way to reduce healthcare costs as well (Fody-Urias, Fillit, & Hill, 2001; Nguyen et al. 2008).

Baby boomers have long been an influential cohort as consumers (Coleman, Hladikova, & Savelyeva, 2006). Now that boomers are entering their retirement years they control 77% of all personal assets and over half of all discretionary spending in the United States (Tooker, 2010). It is no surprise that businesses are vying for their attention. Adults 55-plus are also the fastest-growing segment of health club membership, up from 8 million in 2005 to 10.3 million in 2009 (AARP, 2009). As the baby boomers turn 65 the demand for exercise and wellness facilities and programs is only going to increase (Ziegler, 2002). It is important for senior centers to be able to remain competitive in this market. This means being able to tailor programs to the wishes of their clientele, as discussed previously, as the demographic of that clientele changes.

Finally, it may be important for senior centers to begin, or expand on, developing strategic partnerships within their communities. This could mean reaching out to those

individuals who may refer older adults to EB programs, working with local AAAs and national associations on policies for reimbursement of EB programs by Medicare, and/or partnering with local organizations to offer programs together. The concept of reimbursement for the CDSMP is already in progress and could pave the way for the reimbursement of other EB wellness programs in the future (Blumberg et al., 2013).

For the implementation and confirmation of the EB programs, the most important perspective that emerged from this study from the AAA interviews is that this initiative from the national level is here to stay due to a growing need for preventive services. All AAA directors felt that EB programs work and that there is a need in their areas for these types of programs. Additionally, there is hope that more resources will be available to assist with the implementation of the programs in the future.

From the senior center perspective, more work needs to be done on educating centers about the importance of using programs that are backed by evidence. According to a report by the John A. Hartford Foundation, EB programs can serve many purposes.

“First, they can significantly enhance the health and well-being of older people in the community. Second, they can help attract new clients and funding sources through cutting-edge programming. Third, they can assist them in forging powerful partnerships with other local organizations, including health care providers. Ultimately, EB health promotion programs can pave the way toward creating communities that promote holistic well-being for older adults.” (The John A. Hartford Foundation, 2007, p.2)

Regardless of the support for the use of EB programs from the national level, the interviews with the senior centers indicate that the centers were not as confident about EB programs as the AAAs. More research that contains objectively measured outcomes vs. self-reported outcomes would help establish the credibility of these programs. Additionally, detailed information about the programs needs to reach the community level. A quick search of the AAAs in the study and the Illinois State Department on Aging websites found very little information, if any, related to the EB programs. Also, at the time of this study, a conference was held by an AAA in central Illinois for organizations interested in utilizing EB programs. Although the conference was intended for anyone interested in learning more about EB programs, when asked during conversation about their attendance at this conference, none of the senior centers that were asked were aware of such a conference.

An additional concern for the senior centers regarding the implementation of the EB program within their facility is the requirements of the EB programs. One needs to only glance at the list of approved highest tier programs (included in Appendix A) to see the many requirements of the programs in order to offer them. Beyond the basic requirements of trained instructors, purchase of books, videos and/or equipment, many of the programs have extensive paperwork that is required from both the participants and the centers. Today's senior may not be interested in scheduling a doctor's appointment to receive permission -a requirement of at least one of the programs in the Illinois area- to participate in a program when they can just as easily attend a different program at a local competitor by signing a simple liability waiver. Reducing the amount of paperwork required by the centers and the participants could ease the administration of such programs and be a way to encourage more

participation. As mentioned above, the introduction of additional choices of EB programs, perhaps those with fewer requirements, would be a way to address some center's concerns but an important finding in this study is that these programs need to also offer more flexibility in their implementation. For example in the number of times it is offered a week or for the number of weeks it is offered. This is a controversial concept because there is concern that adapting EB programs to fit a particular facility could affect the fidelity of the program which may, in turn, impact the efficacy of the results (Carvahlo et al., 2013). This study supports the recommendation by Carvahlo et al. to increase research efforts that focus on adapting EB interventions to determine if the outcomes can remain significant. Other studies which support the need for program flexibility recommend that researchers identify core elements of a program that must be maintained in order to keep fidelity and those elements that can be adapted to the needs of a facility without compromising program outcomes (Smith, Hochhalter, Cheng, Wang, & Ory, 2011; Elliott & Mihalic, 2004). It appears that the AoA has listened and reacted to the need for additional EB options. As of October 2016, the AoA will be eliminating the three tier structure and instead consider all programs that are considered "evidence-based" by any operating division of HHS to meet the future definition. "For example, this would include programs listed on ACL's Aging and Disability Evidence-Based Programs and Practices, CDC's Compendium of Effective Interventions, SAMHSA's National Registry of Evidence-Based Programs and Practices, NIH's Cancer Control Evidence-based Portal, etc."

(http://www.aoa.acl.gov/AoA_Programs/HPW/Title_IIID/index.aspx)

Although another study found training and recruitment as barriers to senior centers participating as a site for EB programs, this study did not find similar results (Felix et al., 2012).

This could be because the Illinois AAAs that were in this study have assisted various sites by identifying master trainers, providing free trainings for center staff, or actually offering the program in the center utilizing their own or other trainers. While training was not a prominent concern for participants in this study, a few of the more rural centers interviewed did indicate that without this type of support, they would not be able to continue the program.

Of the 23 surveys returned, there is no significant evidence to show that senior centers serving rural areas, persons with low socioeconomic status and/or minorities were more likely to have no knowledge of or were not offering EB programs, however, the rural facilities were more likely to be offering programs such as Strong for Life than the Chronic Disease Self-Management program (a program associated with higher costs and more sophisticated training requirements) and were less knowledgeable about EB programs that were available, policies related to EB programs, and funding initiatives related to EB programs. The finding that there was no significant difference in offering programs between rural and urban centers is similar to that of a study by Casteel et al. 2014 who found that, while the urban centers in their study were more likely to offer a greater number of programs and services for the prevention and control of chronic diseases than rural centers, no significant difference between rural and urban centers in regards to offering some type of wellness programming existed. The centers in their study reported that if programs were important to their patrons they would find a way to offer them. The researchers suggest that the center's expressed priority of meeting clientele interests is why they did not find a significant difference in programming between the urban and rural centers. Focusing on programming in rural areas is important because studies have shown that individuals living in rural areas tend to be more sedentary and face different

barriers to being active than do those individuals in more urban areas (Wilcox, Castro, King, Housemann, & Brownson, 2000).

To build on the results of the current study, it would be worth exploring why the rural centers were more interested in Strong for Life than CDSMP. It could be because Strong for Life has fewer training requirements and is a low-cost, easy way to offer an exercise program. Or it could be that the centers in this study were influenced by the programming that was available to them or being marketed in their areas by the local AAAs. This is also worth exploring more in future studies to determine if the same results would be true for areas outside those that I studied and to determine if rural facilities are more likely to offer low-cost EB programs than those with higher training and material costs.

The overall results of the study indicate that the diffusion of EB wellness programs to community level senior centers is incomplete and that a gap between policy (the use of EB programs) and implementation exists. Results also yielded in-depth insights into the various factors that can be influenced to effect better dissemination and implementation of policies and practices related to EB programs and preventive care.

This study increases our understanding, and adds to the literature, important information regarding factors influencing the dissemination and implementation of policies and practices related to EB programs and preventive care by identifying gaps in the stages of implementation, and discovering barriers to senior center's participation in EB programs such as clientele preferences, demographic changes, local competition, and program flexibility. Although the public health community has acknowledged the need to increase research focused on the dissemination and implementation of EB programs in order to promote health

and manage chronic disease, to date, dissemination and implementation of EB programs remains a significant challenge (Emmons et al., 2012; Brownson et al., 2009). Even though translation of EB programs into practice is recognized as an important way to improve public health outcomes, the process of researching, distributing findings, creating materials and policies, locating funding and other resources, remains a challenge (Brownson, Colditz, & Proctor, 2012). Understanding how current policies and initiatives impact community level organizations will help researchers and practitioners to form future efforts that will increase the implementation of EB programs. Policy interventions have the potential to influence health outcomes on a broader scale (Brownson et al., 2009). It is equally as important to take a step back and look at the entire implementation process as it is to track the effectiveness of a particular intervention. As discussed by Pressman and Wildavsky (1973) implementation is a cyclical process that needs to be continuously evaluated at all levels. Public policies can be an ideal tool for the promotion of healthy lifestyles (Bellew, Schoeppe, Bull & Bauman, 2008). Identifying gaps in the research-to-policy-to-program implementation process can open the door for additional research, new and improved interventions, and the creation of policies that will support the implementation of EB wellness programs from a national to a community level.

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Appendix A

List of Available Evidence-based Programs

The following pages include the list of the evidence-based programs included on the National Council on Aging website as well as those considered “highest tier” by the Administration for Community Living.

Evidence-based Nutrition, Physical Activity, or Chronic Disease Management Programs National Council on Aging Website

Active Choices

Encourages Physical Activity at Home for Older Women Family Caregivers

Active Living Every Day

Integrates Physical Activity into Everyday Life – for Groups

A Matter of Balance

Reduces Fear of Falling and Increases Activity

Chronic Disease Self-Management Program

Helps People Control Their Symptoms—and Lives

EnhanceFitness

Offers Exercise to All Fitness Levels

EnhanceWellness

Improves Self-Care

Fit and Strong!

Offers Exercises for Lower Extremity Osteoarthritis

Healthy Eating for Successful Living among Older Adults

Improves Knowledge of Nutrition

Healthy Moves for Aging Well

Enhances Activity of Frail Seniors at Home

Title III-D Highest Tier Evidence-Based Health Promotion/Disease Prevention Programs

| Program | Program Goals | Program Description | Delivered By | Training Requirements | Program Costs |
|----------------|--|--|--|--|---|
| Active Choices | Physical activity program that helps individuals incorporate preferred physical activities in their daily lives ▪ Target Audience: Adults 50+ | ▪ 6-month telephone-based individualized program that provides remote guidance and support and builds self-management skills | ▪ Trained activity coach/peer counselor/facilitator who monitors progress, modifies exercise strategies and provides exercise tips Participant materials are available in both English and Spanish. Coach's manual is only available in English | ▪ Facilitator training and certification (recommended, but not required): - 8-hour minimum workshop - Assigned reading and written test - Completion and submission of 3 sample sessions to be reviewed by trainer ▪ Train-the-Trainer is available to organizations that have completed facilitator training and implemented Active Choices for a minimum of 6 months. Includes: - 8-hour | ▪ Licensing Cost: None. One time purchase of Active Choices Manual. ▪ Training Cost: - Minimum \$1200. Costs vary depending on organization, number of trainees, and location ▪ Materials Cost: - \$295 per organization for an electronic Active Choices Manual, which includes coach/counselor training material and electronic program forms for duplication. Material toolkit comes with reproducible forms and information sheets. - Also need to consider workshop space rental, photocopying costs, facilitator supervision time - No cost to participant |

Title III-D Highest Tier Evidence-Based Health Promotion/Disease Prevention Programs

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|--|---|--|--|---|--|--|
| <p>Active Living Every Day (ALED)</p> | <ul style="list-style-type: none"> ▪ Behavior change program that helps participants overcome their barriers to physical activity and make positive changes that improve their health and well-being ▪ Participants learn to set goals, overcome barriers and | <ul style="list-style-type: none"> ▪ 12 week class sessions ▪ Incorporates short lecture and group discussion ▪ Participants choose their own activities and create plans based on individual lifestyle and personal preferences, focusing on moderate-intensity activities that can be added | <ul style="list-style-type: none"> ▪ Trained facilitators. At least 1 trained facilitator is needed per class | <ul style="list-style-type: none"> ▪ A facilitator must complete: <ul style="list-style-type: none"> - an on-line course, participate in a live 2-hour, online training session - pass a competency exam from Active Living Partners (ALP). Refer to the ALP training workshop schedule for availability. ▪ No specific educational or fitness certification is required of facilitators. The successful facilitator is comfortable with | <p>minimum workshop</p> <ul style="list-style-type: none"> - Assigned reading and written test - Completion and submission of facilitator training workshop to be reviewed by a trainer and 6 months experience as a facilitator | <ul style="list-style-type: none"> ▪ Licensing Cost: None. A license from Active Living Partners is required to become a provider and to use the ALED name, logo, and materials ▪ Training Cost: \$373 per facilitator, includes materials (facilitator guide, lesson plans, sample marketing materials, handouts), training fee, and competency test ▪ Participant Materials Cost: <ul style="list-style-type: none"> - An Active Living Every Day book (includes text and access to online resources) must be purchased for every participant. Current price is \$37.95 (bulk order discounts are available) - Step counters are also introduced in the program |
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Title III-D Highest Tier Evidence-Based Health Promotion/Disease Prevention Programs

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| | improve their physical functioning and stay socially connected | | | | | | |
| EnhanceWellness | <ul style="list-style-type: none"> ▪ Maintain or increase the health and functional status of community-based older adults with chronic conditions ▪ Target Audience: Older adults with one or more chronic conditions, excluding dementia | <ul style="list-style-type: none"> ▪ 6 month individualized program, along with regularly scheduled optional support group meetings and evidence-based workshops such as Chronic Disease Self-Management Program (CDSMP) and Matter of Balance (MOB) | <ul style="list-style-type: none"> ▪ A nurse practitioner and/or social worker work with the participant to develop a health action plan and provide support and encouragement to the participant in achieving the goals of that plan | <ul style="list-style-type: none"> ▪ Provider training in EnhanceWellness training | <ul style="list-style-type: none"> ▪ Full Program Cost (program licenses, SS Services, with training limited to Licensee employees, access to web-based data management program (WellWare) and one copy of the Program Materials): <ul style="list-style-type: none"> - Complete package fee: \$6,000 for one site; \$1,000 for each additional site managed by licensee - Annual renewal fee: \$300 ▪ Basic Package Cost (without computer software WellWare): <ul style="list-style-type: none"> - Basic package fee: \$5,000 for one site (\$50 for each additional site) - Annual renewal fee: \$200 | | |
| Fit and Strong! | <ul style="list-style-type: none"> ▪ Manage lower-extremity osteoarthritis through engagement in safe, balanced program of physical activity that builds lower | <ul style="list-style-type: none"> ▪ 8 weeks ▪ 3 times per week ▪ 90 minutes per session | <ul style="list-style-type: none"> ▪ Fit and Strong! Master Trainer | <ul style="list-style-type: none"> ▪ 8 hour Master Trainer-led training ▪ Must be a certified exercise instructor or licensed physical therapist, or PT or OT aide or student | <ul style="list-style-type: none"> ▪ Licensing Cost: (includes training) \$2,000 for a system and \$400 for each system site in Year One; \$1,000 for stand-alone site in Year One - Certified Exercise Instructor Training (\$30.00 per hour for 8 hours) ▪ Equipment Cost: <ul style="list-style-type: none"> - Ankle Weights \$22.00 each - Exercise Bands \$5.00 each - Manuals (Instructor \$30.00 and Participant \$30.00 each) - Exercise Music CDs \$20.00 each - Mats \$40.00 | | |

Title III-D Highest Tier Evidence-Based Health Promotion/Disease Prevention Programs

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| extremity strength ▪ Target Audience: Sedentary older adults who are experiencing lower-extremity joint pain and stiffness and have received physician clearance to participate in exercise engagement in safe, balanced program of physical activity that builds lower extremity strength | | | | | | - Instructor liability insurance \$160.00/year if site does not already have in place |
| Walk with Ease (group program and self-directed program) | ▪ Reduce pain and discomfort of arthritis, increase balance and strength, build confidence in | ▪ Community-based group program: - 6 weeks - 1 hour, 3 times a week - 12-15 recommended participant | ▪ Certified instructor | ▪ Either 3-4 hour in-person Arthritis Foundation training workshop or online training ▪ CPR certification required ▪ First aid certification recommended | | ▪ Licensing Cost: None ▪ Training Cost: \$50-\$75, includes all manuals, books and posters: - Online workshop registration: \$50 per leader - For In-Person 3-4 hour training workshop: Approx \$50-\$75 per leader. Need to consider related expenses, such as room rental and trainer travel. ▪ Participant Materials Cost: |

Title III-D Highest Tier Evidence-Based Health Promotion/Disease Prevention Programs

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| | <p>the ability to be physically active and improve overall health among older adults.</p> <p>Designed to decrease disability and improve arthritis symptoms, self-efficacy, and perceived control, balance, strength, and walking pace</p> <p>▪ Target Audience: Community-dwelling older adults with arthritis and other chronic conditions, such as diabetes, heart disease and hypertension</p> | <p>group size</p> <ul style="list-style-type: none">▪ Self-directed program that combines self-paced walks with health-topic related discussion also available:- 6 weeks- 30 min, 3 times a week | | | <ul style="list-style-type: none">- Book: \$11.95 (bulk discount available for qtys over 100)- Kits are optional▪ For self-directed program:- Walk with Ease participant guide book: \$11.95. <p>Participants can use free online Movement Tracker to record progress and track goals</p> |
| Chronic Disease Self-Management | <ul style="list-style-type: none">▪ Enable participants | <ul style="list-style-type: none">▪ 6 weeks▪ 2.5 hours per | <ul style="list-style-type: none">▪ Workshops are facilitated from a | <ul style="list-style-type: none">▪ 4.5 days of facilitator training | <ul style="list-style-type: none">▪ Licensing Cost (3-year):- Single Program License Cost: If offer only one |

Title III-D Highest Tier Evidence-Based Health Promotion/Disease Prevention Programs

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| Program (CDSMP) | <p>to build self-confidence to take part in maintaining their health and managing their chronic health conditions, such as hypertension, arthritis, heart disease, stroke, lung disease, and diabetes</p> <p>Target Audience: Adults with chronic health conditions</p> | <p>week</p> <ul style="list-style-type: none"> Program provides information and teaches practical skills on managing chronic health problems | <p>highly detailed manual by two trained Leaders, one or both of whom are peer leaders with a chronic disease</p> | <p>and certification, either at Stanford or off-site</p> <ul style="list-style-type: none"> Update training is also available for active certified CDSMP Master Trainers and/or T-Trainers Cross-training is available for other programs once trained as Master Trainers for CDSMP or Tomando Control de su Salud | <p>Stanford Program in one language: \$500.00 for offering 30 or fewer workshops and 6 Leader trainings; \$1,000 for offering 90 or fewer workshop and 12 Leader trainers</p> <ul style="list-style-type: none"> Multiple Program License Cost: \$1,000.00 for offering up to 75 total (all programs combined) workshops and 6 Leaders trainings; \$1,500.00 for offering up to 120 total (all programs combined) workshops and 12 Leaders trainings Custom agreements: min of additional \$1,000 Training Cost : <ul style="list-style-type: none"> On-site Stanford University training (4.5 days, includes all materials): \$1,600 per health professional; \$900 for a lay person with a chronic disease Off-site 4.5 day training (request 4-6 months in advance): \$16,000 (\$10,000 to Stanford, \$6,000 for two trainers), excludes additional costs such as materials and transportation for two trainers Web-based update training: \$250 Participant Materials Cost: <ul style="list-style-type: none"> CDSMP Book: \$18.95 (bulk pricing is available) Relaxation tape/CD: \$12 each |
| <p>Better Choices, Better Health – Chronic Disease (online Chronic Disease Self-Management Program CDSMP)</p> | <p>Enable participants to build self-confidence to take part in maintaining their health and managing their chronic health conditions,</p> | <p>On-line interactive version of the Chronic Disease Self-Management Program (CDSMP)</p> <ul style="list-style-type: none"> 2 hours per week for 6 weeks Participants | <p>Two trained peer moderators per workshop</p> <ul style="list-style-type: none"> Moderators follow a script and assist participants by modeling action planning and problem solving, offering encouragement, and posting to the bulletin boards | <p>Moderators are trained online by first participating in a workshop and then co-leading the workshop with a previously trained moderator.</p> <ul style="list-style-type: none"> There is a detailed online and downloadable moderators' manual | <ul style="list-style-type: none"> — Dedicated Workshop Implementation” Option: <ul style="list-style-type: none"> For single organization One-time set-up fee: \$5000 Total Per Workshop Fee, assuming all outsourced staff: \$5,750 (<i>Workshop license fee: \$3,000; Staffing fee-administrator: \$500; Staffing fee-mentor: \$1,500</i>) Companion workbook included OR “Shared Workshop Implementation” Option: <ul style="list-style-type: none"> Participants are pooled from multiple organizations |

Title III-D Highest Tier Evidence-Based Health Promotion/Disease Prevention Programs

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| | <p>such as hypertension, arthritis, heart disease, stroke, lung disease, and diabetes</p> <p>• Target Audience: Adults with chronic health conditions who are comfortable using a computer</p> | <p>log on at their convenience 2-3 times per week for a total of about 2 hours per week.</p> <p>Participants do not need to log on at the same time.</p> <ul style="list-style-type: none"> • Program is offered on a dedicated website utilizing bulletin boards for discussion • Approximately 25 people per workshop. All interactions between moderators and participants take place online • All information is private and anonymous | <ul style="list-style-type: none"> • Moderators do not deliver content, which differs from the small-group program | <p>that gives daily and weekly instructions as to moderator duties</p> | <ul style="list-style-type: none"> - Organization must target 65 completers within a 12 month period OR support at least 100 participants - One-time set-up fee: \$3000 - Total Per Participant Fee: per completer fee \$300 OR per participant fee \$200 - License, workshop staff and companion workbook included |
| Tomando Control de su Salud (Spanish Chronic Disease Self-Management) | <ul style="list-style-type: none"> • Culturally appropriate chronic disease self-management | <ul style="list-style-type: none"> • 6 weeks • 2.5 hours per week • Spanish-speaking | <ul style="list-style-type: none"> • Workshops are facilitated by two trained leaders, one or both of whom are non-health | <ul style="list-style-type: none"> • Leaders and trainers must both speak and read Spanish fluently • 4.5 days of facilitator training | <ul style="list-style-type: none"> • Licensing Cost (3-year): - Single Program License Cost: If offer only one Stanford Program in one language: \$500.00 for offering 30 or fewer workshops and 6 Leader trainings; \$1,000 for offering 90 or fewer workshop |

Title III-D Highest Tier Evidence-Based Health Promotion/Disease Prevention Programs

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| Program) | <p>program for Spanish speakers. Participants do not need to read Spanish.</p> <p>• Target Audience: Spanish-speaking adults with chronic health conditions</p> | <p>people with different chronic health problems attend together</p> | <p>professionals with a chronic diseases themselves. • All workshops are given in Spanish without translators</p> | <p>and certification at Stanford. All training is conducted in Spanish without interpreters.</p> <p>• 1.5 day on-site cross-training is available at Stanford to those who have already completed the English CDSMP training</p> <p>• Cross-training is available for other programs once trained as Master Trainers for CDSMP or Tomando Control de su Salud</p> <p>• Web-based cross training available. Webinars are conducted in Spanish. Prerequisite: in-person CSMP training.</p> | <p>and 12 Leader trainers</p> <p>- Multiple Program License Cost: \$1,000.00 for offering up to 75 total (all programs combined) workshops and 6 Leaders trainings; \$1,500.00 for offering up to 120 total (all programs combined) workshops and 12 Leaders trainings</p> <p>- Custom agreements: min of additional \$1,000</p> <p>• Training Cost :</p> <p>- On-site Stanford University training (4.5 days, includes all materials): \$1,600 per health professional; \$900 for a lay person with a chronic condition</p> <p>- On-site 1.5 day cross-training: \$700.00. Must have first completed on-site Chronic Disease Self-Management Program (CDSMP) training</p> <p>- Off-site training: \$16,000 (\$10,000 to Stanford, \$6,000 for two trainers), excludes additional costs such as materials and transportation for two trainers (for details: http://patienteducation.stanford.edu/training/trnfees.html)</p> <p>- Off-site 2 day cross-training: \$6,400 (\$4,000 to Stanford, \$2,400 for two trainers)</p> <p>• Participant Materials Cost:</p> <p>- All in Spanish</p> <p>- Book: \$18.95 (bulk pricing is available)</p> <p>- Audio relaxation tape/CD: \$9.60-\$12 each (bulk pricing available)</p> <p>- Audio exercise tape/CD: \$9.60-\$12 each (bulk pricing available)</p> |
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Appendix B

Interview Guides

The following questionnaires were used for the Area Agency on Aging and the Senior Center interviews. The questions were developed using the Diffusion of Innovations Theory as a guideline.

Name: _____

Position at AAA: _____

Length of time working for AAA: _____

Questions:

- 1) Tell me about the programs your organization promotes within your service area?
- 2) Of those programs, do you feel there are certain programs that are more of a priority within your organization?
- 3) What do you feel about nutrition, physical activity, and/or chronic disease management programs?
- 4) What do you feel about evidence-based programming?
- 5) Are you familiar with any evidence-based physical activity, nutrition, and/or chronic disease management programs? Where did you learn about these programs?
- 6) What evidence-based programs (if any) does your organization promote within your service area?
- 7) What factors influence you to choose these (evidence-based) programs over other programs that may be available?
- 8) Tell me about your dissemination strategies. How do you choose the areas in which these programs will be implemented?
- 9) How do you choose which senior centers will implement these programs? What about other AAAs or National organizations, tell me how they influence your strategies?
- 10) Tell me about your relationship with local organizations within your service area. Can senior centers choose to implement any type of programs they want?
- 11) What incentives exist for senior centers to implement evidence based programs?
- 12) What do you feel would encourage more organizations to offer evidence-based programs?
- 13) What recommendations would you have for a senior center that was interested in offering physical activity, nutrition, and/or chronic disease management programs?

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- 1) What types of programs do you offer at your Senior Center (please check all that apply)
- a. Education Classes (i.e. guest speakers, art/craft class, etc.)
 - b. Exercise Programs
 - c. Chronic Disease Self Management Program (combination of exercise, nutrition, etc.)
 - d. Meal Site and/or provider of home delivered meals
 - e. Nutrition or weight management programs
 - f. Information and Assistance (such as information or help with insurance, Medicare D, financial fraud, etc.)
 - g. other (please list other programs you may provide)
-

2) How many clients does your organization serve?

- a. 50-199
- b. 200-399
- c. 400-599
- d. 600-799
- e. 800-999
- f. 1000+

3) How many full-time staff are employed at your organization? _____

4) How many part-time staff are employed at your organization? _____

5) What percentage of your patrons are considered low socioeconomic status (below the poverty line)?

- a. 0-20%
- b. 21-40%
- c. 41-60%
- d. 61-80%
- e. 81-100%

6) What percentages of your patrons are considered to be of a minority racial or ethnic status?

- a. 0-20%
- b. 21-40%
- c. 41-60%
- d. 61-80%
- e. 81-100%

- 7) Does your facility serve a rural population?
yes
no
- 8) What is your annual budget for serving clients? (need to look into this to determine appropriate amounts to list).
a. \$50,000 – 100,000
b.
- 9) Does your facility funding come from (please check all that apply)
a. Federal resources (grants, pass-through, etc.)
b. State resources (grants, pass-through, etc.)
c. City or County resources (direct budget lines, city or county trusts, etc.)
d. Participant fees
e. Area Agency on Aging resources
f. Fundraising
- 10) Are you familiar with the term evidence-based programming?
a. yes
b. no
- 11) Does your facility offer any of the following evidence-based physical activity or nutrition programs? (I will add the list).
- 12) If you answered yes to #6, please indicate approximately how many individuals participate in your evidence-based programs
a. physical activity program(s) (Please list name of program and number of participants)
program: _____ # of participants: _____
program: _____ # of participants: _____
b. nutrition program (please list the name of the program and number of participants)
program: _____ # of participants: _____
program: _____ # of participants: _____
- 13) If your facility offers physical activity or nutrition education programs that are not listed in #6, please provide the name of the program and the number of participants.
a) physical activity programs(s)
program: _____ # of participants: _____

program: _____ # of participants: _____

b) nutrition program(s)

program: _____ # of participants: _____

program: _____ # of participants: _____

14) Have you shared information about your facility programs with other organizations in order to promote their use of a particular evidence-based physical activity or nutrition program?

yes

no

15) If you are using an evidence-based program, have you needed to change any program components in order to fit your facility participants?

16) Do you have participants who are non-English speaking?

17) If yes, are your program materials available in their language?

Knowledge

1. What do you think about [senior center name] offering physical activity programs to its senior community? In your opinion, how important is it to your senior population?
2. What do you think about [senior center name] offering nutrition programs to its senior community? In your opinion, how important is it to your senior population?
3. What do you think about [senior center name] offering chronic disease management programs to its senior community? In your opinion, how important is it to your senior population?
4. Your senior center is currently offering [name of programs] (if applicable). How do you find out about programming for your community?
5. In your opinion, what are the best programs you can offer in your facility?
6. Are you aware of 'evidence-based' programs? Tell me what you know about it?
[Note: Make sure that from this point onwards the interviewee understands what 'evidence-based' programs are]
7. What support do you think [senior center name] can receive from the State to offer evidence-based physical activity, nutrition and chronic disease management programs?
8. What do you know about the funding from the Older American's Act through the State Department on Aging, or the Area Agency on Aging?
9. What do you know about "Title III D" of the Older Americans Act?
10. Are you aware of any other policies, National or State, formal and informal, that can help [senior center name] to offer evidence-based physical activity, nutrition and chronic disease management programs?
11. How well do you know the senior population you serve? For example, demographic characteristics such as: socioeconomic status, race or ethnicity, rural or urban settings, or gender?
12. Can you explain how these characteristics influence the types of programs you offer to your senior community?

Persuasion

13. Tell me about the incentives you feel exist for offering physical activity, nutrition or chronic disease management programs?

14. Tell me about incentives you feel exist for offering evidence-based physical activity, nutrition or chronic disease management programs?

15. What do you like about the [name of programs] you selected to offer over others that may have been available?

16. What type of support within [senior center name] do you feel exists to offer evidence-based programs?

17. What type of barriers within [senior center name] do you feel exists that prevent offering evidence-based programs?

Follow-up questions:

How do you perceive the influence from [senior center name] staff members?

How do you perceive the influence from the senior community you serve?

18. What type of support outside of [senior center name] do you feel exists to offer evidence-based programs?

Follow-up questions:

How do you perceive the influence from the State Department on Aging, or the Area Agency on Aging?

How do you perceive the influence from National or State policies?

19. What type of barriers outside of [senior center name] do you feel exists that prevent offering evidence-based programs?

Decision

20. Who is responsible to make the final decision to offer or not to offer (evidence-based) programs in [senior center name]?

21. When you decided to offer or not to offer (evidence-based) programs in [senior center name], what factors influenced this decision? Tell me about factors that are internal or external to [senior center name]?

Follow-up questions:

In what way do staff members influence the decision-making?

In what way do board members or the senior community that you serve influence decision making?

In what way does the State Department on Aging, or the Area Agency on Aging have an influence?

In what way does funding influence your decision-making?

In what way does space or location influences your decision making?

In what way do the characteristics of your senior community influence your decision making?

Implementation

22. How often do you offer your program?

23. What type of support, if any, do you receive for offering the program in your facility?

Follow-up questions:

In what way do staff members support offering the program?

In what way do board members or the senior community that you serve support offering the program?

In what way does the State Department on Aging, or the Area Agency on Aging support offering the program?

In what way do the characteristics of your senior community support offering the program?

24. What changes, if any, have you made to the program in order to implement it within your facility?

25. What type of training do your staff members need in order to facilitate the type of program that you offer?

26. In your opinion, what influence do the training-requirements have on the type of program you offer?

27. In what ways have you let your senior community members know about the program you are offering?

Confirmation

28. What benefits do you feel individuals in your organization receive from your evidence-based physical activity, nutrition or chronic disease management programs?

29. What types, if any, of outcome measures do you have for your programs?

Follow-up questions:

Do you measure attendance?

Do you measure types of individuals who participate (i.e. low socioeconomic status, race/ethnicity, male/female)?

30. What are your future plans for offering this program, or others to your community?

31. How will you promote the use of the program by others in your community?

32. Do you perceive any future barriers to offering the program(s) in your facility?

33. In your opinion, what resources do you need to have in order to continue to offer evidence-based physical activity, nutrition and chronic disease management programs? By resources, I mean funding, space, staff, etc.

Appendix C

Acronyms

AAA – Area Agency on Aging

ACL – Administration for Community Living

AoA – Administration on Aging

CDC – Centers for Disease Prevention and Control

CDSMP – Chronic Disease Self-Management Program

EB – Evidence-Based

NCOA – National Council on Aging

OAA – Older Americans Act