

Wellness Promotion in Community-Dwelling Older Adults

H. Machele Skinner

UMKC

Abstract

The older adult population is growing, and is the largest utilizer of healthcare. Most older adults live independently within the community. Community-based health promotion programs benefit the maintenance of older adult health. Advanced practice nurses are well-positioned to develop and implement programs within the community to promote older adult health. The project question was the following: In community-dwelling older adults living in a county in the central Midwest, does participation in a health-promotion program enhance the adoption of health promoting lifestyle habits during three months at a senior center? The sample was five independent-living adults, 65 years and older, attending a community-based senior center. An advanced practice nurse-designed educational program was implemented to support the health of older adults attending a community senior center. Five sessions covered the topics of: fall prevention, heart health, preventative care, medication safety, and proactive health practices. Outcomes were measured using the Health Promoting Lifestyle Profile-II (HPLPII) in a pre-posttest format to assess the adoption level of healthy lifestyle behaviors. HPLPII pre- posttest total scores (3.22 and 3.10), and subscale scores were not statistically significant, ($z = -0.966$, $p = 0.334$). An increase was noted in the subscales of Health Responsibility (3.18 to 3.24) and Spiritual Growth (3.34 to 3.44). The relative consistency of HPLPII pre- posttest scores shows that the program reinforced the healthy lifestyles of older adults. These findings indicate that community-based health promotion programs foster staying healthy in older adults.

Keywords: community, elderly, health programs, health promotion, older adults

Wellness Promotion in Community-dwelling Older Adults

The older adult population is growing exponentially within the United States. Those 65 years and older tallied 40.3 million in 2010 and are expected to reach over 88.5 million by 2050 (United States Census Bureau, 2016). With 92% living with one chronic disease and 77% living with two, older adults are the largest utilizers of healthcare today (National Council on Aging [NCOA], 2014). Although 75% of healthcare costs are spent on treating chronic diseases, only 1% or less is spent on promoting wellness within the community (NCOA, 2014).

The Center for Disease Control and Prevention's (CDC) Healthy Aging Program (2015) and Healthy People 2020 (2016) have outlined goals to promote the health and prevent injury and disease in the older adult population. Efforts are needed to help community-dwelling older adults (CDOA) manage their chronic diseases and maintain wellness (Belza et al., 2006; Cohen et al., 2006; Engel & Kieffer, 2008; Frosch, Rincon, Ochoa, & Mangione, 2010; NCOA, 2014). Community-based health promotion programs highlighted in the literature show positive outcomes by enhancing older adults' adoption of healthy lifestyle behaviors, and improving their chronic disease management, nutrition status, physical activity level, preventative care attainment, and overall wellness (Belza et al., 2006; Cohen et al., 2006; Engel & Kieffer, 2008; Frosch, et al., 2010; Kaczorowski et al., 2011; Ogden, Richards, and Shenson, 2012; Robare, et al., 2011; White, 2011).

Older adults have been found to adopt more health-promoting lifestyle behaviors than young and middle age adults (Becker & Arnold, 2004; Walker, Volkan, Sechrist, & Pender, 1988). Despite this finding, CDOA remain the largest utilizers of healthcare, and face many barriers in understanding their health and maintaining their wellness. The current healthcare system is complex and fast-paced. The average primary care office visit is 15.7 minutes and

covers a median of six health topics, therefore, providing little time for in-depth discussion and patient understanding (Tai-Seale, McGuire, and Zhang, 2007). An additive issue affecting healthcare understanding for older adults is their lack of sufficient health literacy. Poor health literacy has been linked to poor health outcomes including medication errors, and Healthy People 2020 has recognized health literacy as an issue of national significance (CDC, 2009; Healthy People, 2016). In order to use the healthcare system effectively, one must possess greater skill than the high school level and have sufficient oral communication and math skills (CDC, 2009).

Among adult learners, those 65 years and older have been found to have the least proficient health literacy skills and the highest proportion of persons with below basic literacy skills (CDC, 2009). This literacy deficiency can be further complicated by communication barriers experienced by older adults related to health management. A paternalistic perception by the patient of the provider may cause older adults to be reluctant to question a prescribed plan of care (Miller, 2012). Secondly, a lack of confidence in their knowledge, and/or communication abilities can prohibit discussion (Holland, 1980; Miller, 2012).

The sensory and cognitive changes experienced by older adults are compounding issues affecting competent communication and adequate understanding. Hearing impairment is often undisclosed by the patient due to embarrassment (Bollinger, Waugh, & Zatz, 1977; Geschwind, 1980, Gravell, 1988). They may agree and voice understanding, but not comprehend what was said. Changes in vision may deter the understanding of written materials (Gravell, 1988). Cognitive changes accompanying dementia and cerebral vascular disease can cause decreased understanding, poor oral communication, and memory impairment in relation to health maintenance (Bollinger et al., 1977; Holland, 1980; Miller, 2012). Functional disabilities can

also play a large part in older adults' ability to manage their health. These factors can range from mobility and dexterity deficiencies to financial and environmental issues (Miller, 2012).

Older adults are motivated to learn about their own health and how to manage their wellness. They are more selective in assigning importance to new information (Storandt, 1980). Educational materials should be meaningful and relevant in order for them to retain the information (Miller, 2012). A holistic assessment is needed to ascertain an older adult's healthcare needs, and time should be provided to foster understanding (Miller, 2012).

Community-dwelling older adults have distinctive health needs and require a specialized approach from healthcare providers. With the continuing growth of the older adult population and their increasing healthcare use, measures should be identified and developed to assist CDOA in maintaining wellness (Federal Interagency Forum on Aging-Related Statistics, 2012; NCOA, 2014). These measures need to be cost-efficient and effective (Administration on Community Living, 2015). Community-based health promotion programs can meet these expectations (CDC, 2015; Harari et al., 2008; NCOA, 2015; Ogden, Richards, & Shenson, 2012). These efforts can generate better understanding of healthcare issues, enhance adoption of healthy lifestyle behaviors, and actively supplement primary and acute care (CDC, 2015; Harari et al., 2008; Kennedy-Malone, Fletcher, & Martin-Plank, 2015; Lorig et al., 2001; NCOA, 2015; Ogden, Richards, & Shenson, 2012; Park, 2004). Community-dwelling older adults living in Northwest Missouri are not immune to the above issues and endure the same healthcare difficulties as the national CDOA population.

Community-dwelling older adults living in Andrew County Missouri have multiple risk factors and chronic diseases which they have difficulty managing, as well as limited community resources available to help them maintain their own wellness (Senior Center Assistant Director,

personal communication, February 8, 2016; CDC, 2013; Missouri Department of Health and Senior Services, 2007). Currently in Andrew County, older adults comprise 17% of the total population (United States Census Bureau, 2016). They are not reaching goals in preventative care, and have increased health risk factors such as obesity, sedentary lifestyle, smoking, and hypertension (Cafer et al., 2013; CDC, 2013). Missouri older adults report an average of 5.9 physical unwell days per month, and their rate of mortality related to cardiovascular disease is higher than the national average at 193.4 versus 170.5 (CDC, 2013; CDC, 2014).

Purpose Statement

The purpose of the Wellness Promotion in Community-dwelling Older Adults Project was to determine if an evidence-based wellness-focused educational program enhanced the adoption of health promoting lifestyle habits in community-dwelling older adults living in Andrew County Missouri during a 3-month time period at a senior center.

Facilitators and Barriers

The major facilitators for the implementation of the project were the commitment and support of key stakeholders of university and local Senior Center administration. The university provided nursing students and supplies to implement the intervention, and the senior center hosted the program and provided access to their clients. The barriers in implementing the project were consistent attendance and sustained audience engagement across all five sessions. The goal was to have a core set of clients attend all sessions, and complete pre- and post-tests.

Unfortunately, the senior center clients select the days they come to the center, and the older adults may be prevented from attending sessions related to extraneous factors, such as transportation issues, other appointments, or health reasons. Efforts were made to promote the program and foster motivation to attend; however, older adults are discerning, and may have not

wanted to participate. These potential barriers were incorporated into planning the project, and the intervention was designed to allow for these variances. Sustainability of the project was promoted by continued support from the university in collaboration with senior center in an effort to assist older adults in staying healthy.

Problem Statement and PICOTS

Although research shows community-based health promotion programs produce positive health benefits for CDOA, no wellness program for older adults is currently being offered in Andrew County. The PICOTS for this project was, in community-dwelling older adults living in a county in the central Midwest, does participation in a wellness-focused educational intervention enhance the adoption of health promoting lifestyle habits, during fall 2016 at a senior center.

Literature Search Strategies

A literature search was conducted to identify research about community-based health promotion programs for CDOA with a comprehensive health management focus. The search included the following keywords: community, elderly, older adults, health programs, and health promotion. The databases used in the search were EBSCOHost, Academic Search Complete, Education Full Text, CINAHL, ProQuest, and the Cochrane Database. Additionally, the internet browser, Google was used to locate information, statistics, and evidence-based guidelines from government and private agencies focused on community-based older adult health promotion.

The search period spanned from 1980 to 2016 with the majority of selected studies falling during 2001 to 2015. Inclusion criteria were English and focused on community-based health promotion programs geared toward CDOA. Studies conducted in long-termed care facilities, with homebound clients, and featuring in-home interventions were excluded. Also, studies

focusing on specific disease processes and in particular ethnic groups were excluded from review. Thirty-three studies and four evidence-based guidelines served as evidence for this project.

Using the Hierarchy of Evidence presented by Melnyk & Fineout-Overholt (2015) the chosen literature was ranked using the seven Levels of Evidence. Five randomized control trial (RCT) studies, and one follow-up study to a previous RCT were ranked at Level 2 evidence. Twelve studies presented Level 4 evidence and included cohort analytical studies, cohort studies, and case-control studies. Two literature reviews were ranked at Level 5. Four descriptive studies were ranked at Level 6. Last, four articles representing expert opinion ranked at Level 7 (see Appendix A for Synthesis of Evidence Table).

Synthesis of Evidence

The 33 studies represented a total of 13,050 study participants 65 years and older. Study sample sizes ranged from 11 to 2889. More female participants were reported than male. Studies presented programs conducted in both urban and rural areas of the United States and one in Ireland.

Benefits of Health Promotion Programs

The literature supports that community-based health promotion programs designed for older adults produce benefits for participants (Albert et al., 2014; Belza et al., 2006; Cohen et al., 2006; Engel & Kieffer, 2008; Fox et al., 2010; Frosch et al., 2010; Harari et al., 2008; Hopman-Rock & Westhoff, 2002; Kaczorowski et al., 2011; Lorig et al., 2001; Luten, Reijneveld, Dijkstra, & Winter, 2015; NCOA, 2014; Pogge & Eddings, 2013; Robare et al., 2011; Wallace, Lees, Minou, Singleton, & Stratton, 2014; White, 2011). Program topics varied per program

offering, but a trend was noted. Topics that were frequently presented comprised four main themes: lifestyle choices, chronic disease management, safety, and psychosocial issues.

Lifestyle choices themed programs. Lifestyle choices themed programs included the topics of physical activity, nutrition, and weight control. In these programs participants realized an increase in motivation to exercise, and achieved an increased activity level (Aselton, 2011; Belza et al., 2006; Buchner & Pearson, 1989; Fitts et al., 2008; Fox et al., 2010; Frosch, et al., 2010; Harari et al., 2008; Hopman-Rock & Westhoff, 2002; Imamura, 2002; Lorig et al., 2001; Luten et al., 2015; Pogge & Eddings, 2013; Wallace et al., 2014; White, 2011; White & Nezey, 1996). Secondary benefits, such as decreased falls, increased fitness level, maintenance of independence, and improved overall quality of life were reported by participants after increasing physical activity (Wallace et al., 2014; White, 2011). The impact of physical activity programs showed long-term effects with increased activity level being up to a year (Harari et al., 2008; Hopman-Rock & Westhoff, 2002; Luten et al., 2015). Programs with nutrition and weight control education helped participants gain new nutrition knowledge (Klinedinst, 2005; Pogge & Eddings, 2013).

Chronic disease management theme. Chronic disease management, including medication management and preventative care, was the featured theme in eight studies. Participation in health promotion programs demonstrated an improvement in awareness and knowledge about diseases (Imamura, 2002; Truncali, Dumanovsky, Stollman, & Angell, 2010) while producing a reduction of cardiovascular risk factors, such as blood pressure reading and cholesterol level reduction (Kaczorowski et al., 2011; Robare et al., 2011; Truncali et al., 2010; White & Nezey, 1996). An additional positive impact was that medication knowledge and adherence were enhanced (Robare et al., 2011; Wissman & Wilmoth, 1996). Two studies

centered on prevention measures and found an increase in the acquisition of pneumococcal vaccines and colonoscopy procedures (Harari et al., 2008; Robare et al., 2011). White & Nezey (1996) and Lorig et al., (2001) noted a growth in self-efficacy and health responsibility. Further, hospital admissions, emergency department visits, and physician visits decreased in studies addressing chronic disease management (Barnason, Zimmerman, & Youn, 2012; Cohen et al., 2006; Kaczorowski, 2011; Lorig et al., 2001).

Safety theme. The theme of safety was present in programs featuring fall prevention information. All three studies reported a decrease in instances of falls after the program (Albert et al., 2014; Cohen et al., 2006; Fox et al., 2010). Notably, exercise and increased physical activity were found to improve fall rates (Cohen et al., 2006; Fox et al., 2010).

Psychosocial issues theme. Ten studies addressed the psychosocial issues theme which included depression, stress management, and socialization (Buchner & Pearson, 1989; Cohen et al., 2006; Fitts et al., 2008; Hopman-Rock & Westhoff, 2002; Imamura, 2002; Lorig et al., 2001; Matthews, Parker, & Drake, 2012; Pogge & Eddings, 2013; Wallace et al., 2014; White, 2011). Fitts et al. (2008) noted a decrease in depression in participants while Matthews, Parker, and Drake (2012) simply performed depression screenings. Lorig et al. (2001) identified stress as frustration and social limitations, and reported a decrease in these measures in participants. Also, studies reported that socialization was enhanced or supported through participation in community-based health programs, but was not measured directly (Hopman-Rock & Westhoff, 2002; Imamura, 2002; Wallace et al., 2014; White, 2011). White (2011) used a faith-based design to support spirituality and psychosocial health which led to participants reporting an increase in quality of life. Participants reported less loneliness and less social isolation after program involvement (Cohen et al., 2006; Wallace, 2014). Studies showed an improvement in

morale and an increase in social relationships after participating in community-health programs (Cohen et al., 2006; Imamura, 2002).

Program Design

Programs were conducted at a variety of settings including community centers (Fitts et al., 2008; Wissman & Wilmoth, 1996), community senior centers (Albert et al., 2014; Belza et al., 2006; Buchner & Pearson, 1989; Frosch et al., 2010; Newman, 2005; Truncali et al., 2010; White & Nezey, 1996), and independent-living apartment complexes (Imamura, 2002). All programs were designed and guided by trained health professionals or specially trained peer-mentors. The Quad Council of Public Health Nursing (2011) recommends that public health nurses at the Tier 2 level of competency should implement community-based health programs, and collaborate with multiple professions and stakeholders to produce quality health promotion interventions.

Sessions ranged from one-time events (Wissman & Wilmoth, 1996) to multi-session interventions, and extended to a 24-months (Robare et al., 2011). Evidence-based guidelines for community-based health promotion programs emphasize tailoring programs to the specific needs and available resources to the target audience (Belza, 2007; Krist et al., 2013; Lis, Reichert, Cosack, Billings, & Brown, 2008). Convenience of setting and integration of peer-mentorship is recommended as program components (Belza, 2007; Krist et al., 2013; Lis et al., 2008).

Recruitment and Attendance

Recruitment and attendance were identified as important factors in the success of community-based health promotion programs (Belza, 2007; Brady, 2015; Buchner & Pearson, 1989; Frosch et al., 2010; Klinedinst, 2005; Krist et al., 2013; Luten et al., 2015; Wright & Hyner, 2011). Personal touch, frequent contact, and convenience of location were identified as

increasing attendance (Buchner & Pearson, 1989; Brady, 2015). Using multiple methods of advertisement were deemed more effective in attracting audiences than single strategies (Brady, 2015; Klinedinst, 2005; Luten et al., 2015). Additionally, free prizes or gift cards were well-received by participants (Frosch et al., 2010).

Brady (2015) noted that personally meeting with primary care physicians facilitated the provider recommending community-based programs to older adults. This fosters older adult participation in the programs. Older adults who were extrinsically motivated and had lower education levels were found to attend programs more often than those who were intrinsically motivated with higher education levels (Loeb, O'Neill, Gueldner, & Hall, 2001). Additionally, those having lower mental and social health had an increased attendance rate (Loeb et al., 2001). Other personal characteristics found to induce participation in programs were a drive to stay mentally, socially, and physically active, along with, a positive attitude towards learning (Narushima, Liu, & Diestelkamp, 2013).

Discussion of Evidence

The studies establish evidence that community-based health promotion programs provide health improvement in CDOA and promote wellness. Although the literature shows a trend of positive outcomes through the implementation of health promotion programs, the majority of research is small cohort analytical studies based on sporadic interventions across a multitude of settings. Most programs were not standardized, and were time limited with little evidence of sustainability or long-term health maintenance in the populations served. Studies did not systematically follow evidence-based guidelines, and program evaluation plans were not homogeneous; although, guidelines are readily available in the literature (Belza, 2007; Bryant, Altpeter, & Whitelaw, 2006; Krist, 2013; Lis et al., 2008).

Most outcome measures were provided through participant self-report which may bias the data and skew outcomes. Participants may have a desire to please and report better measurements than occurred (Miller, 2012). Additionally, the outcomes were measured immediately after the intervention with few performing long-term follow-up. Another area of contention is the lack of comprehensive programs. The majority of study designs offered physiologic topics with few offering both physiologic and psychosocial topics.

Recruitment and attendance were identified as problematic (Buchner & Pearson, 1989; Brady, 2015; Frosch et al., 2010; Klinedinst, 2005; Luten et al., 2015). This raises a concern as sample groups may not represent the general population of CDOA. Following evidence-based guidelines would aid program organizers in their recruitment and attendance efforts (Belza, 2007; Bryant et al., 2006; Krist, 2013; Lis et al., 2008).

Theory

The theory chosen to guide the project is Nola Pender's Health Promotion Model (HPM). It is based on theories of human behavior (Pender, 2011). The HPM offers a conceptual framework that allows nursing to direct care towards improved health and increased functional ability (Peterson & Bedlow, 2004, p. 293). It features the concepts of: perceived self-efficacy, perceived barriers, perceived benefits, interpersonal influences, and situational influences that are relevant to the selected health behavior (Peterson & Bedlow, 2004). Pender's definition of health is positive and humanistic (Peterson & Bedlow, 2004). She defines health as actualization of human potential through goal-directed behavior, competent self-care, and satisfying relationships (Peterson & Bedlow, 2004, p. 293). The HPM acknowledges the patient holistically, includes the contribution of interpersonal influences, and recognizes situational influences (Peterson & Bedlow, 2004).

This theoretical approach supports the project components of patient knowledge acquisition, influence of the nurse-patient relationship, uniqueness of community-based care environment, and adoption of healthy lifestyle behaviors (see Appendix B for Theory to Application Diagram). Walker, Sechrist, & Pender (1987) used the HPM to design the Health Promoting Lifestyle Profile questionnaire to measure the adoption of healthy behaviors. Studies utilizing the Health Promoting Lifestyle Profile to capture levels of CDOA healthy behavior adoption (Walker et al., 1988); and have found CDOA to have higher levels of adoption after participating in a community-based health-promotion program (Park, 2004; White & Nezey, 1996).

Methods

IRB Approval

The project was considered human subjects research, expedited category seven. The evidence based project served to implement the evidence of the positive effects of community-based health promotion programs with CDOA living in Andrew County Missouri. Survey data were collected from participants, and participation in the educational program posed more benefits than harm.

Approval for the project was obtained from the University of Missouri-Kansas City (UMKC) IRB (see Appendix C for IRB Approval Letter). The senior center administration approved the student investigator to present the intervention with their clients. Participation by senior center clients was voluntary, and their permission for project involvement was obtained at the first program session (see Appendix D for IRB Approved Consent).

Ethical Issues

The major research ethics aspects of the project were confidentiality, protection, and benefit vs harm. Confidentiality of all surveys and collected materials were maintained by not allowing participants to place their names or any direct identifiers on paperwork. The maintenance of participant confidentiality was reviewed with the nursing students assisting in the intervention. Additionally, all collected data was stored in a locked cabinet which can only be accessed by the student investigator. All data was de-identified and a code sheet was used in the project.

Although the sample group has not been directly identified as a research vulnerable group, they do have varying degrees of vulnerability. The student investigator was aware of these vulnerabilities or potential vulnerabilities and used caution to not exploit the participants. Exploitation was prevented by reminding participants that attendance and completion of surveys were voluntary. The intervention was designed to bring more benefits to participants than harm. The goal of the program was to provide education, awareness, and encouragement to participants to help them attain or maintain higher-level wellness. The student investigator had no conflicts of interest with the project. As the student investigator was the main designer, implementer, and evaluator, a broad view of the project was maintained. Efforts were made to decrease bias and skewed outcome results.

Funding

Funding resources for the project included in-kind funding received from the university and the local Senior Center. Missouri Western State University provided nursing students to assist with implementation of the intervention and printing of materials for the program. The senior center hosted the program and provided the building, utilities, food, and technology.

Funding to purchase three \$50 gifts cards was explored (see Appendix E for Budget Table of Expenses).

Setting and Participants

The setting of the project was a local senior center in northwest Missouri. It is a community-based center serving adults residents of Northwest Missouri; however, the target group is individuals 60 years and older. The senior center is a federally- and state-funded organization and a recognized community nutrition center for older adults. The center provides hot meals daily, coordinates the local Meals-on-Wheels program, offers health classes, and hosts social activities including Saturday night dances. A daily census of attendance ranges between 25 and 50 people. For project sample inclusion and exclusion criteria, anyone 60 years and older coming to the senior center was invited to participate in the program. They could attend one to all sessions, and no one was excluded. Those who did not wish for their data to be shared in aggregate data or who did not want to complete surveys, were invited to participate in the intervention without their data inclusion in the analysis.

The sample group lives in Northwest Missouri and visits the senior center voluntarily. Although the group is homogenous and the majority are Caucasian, they have differences. The age spans from 60 years up to 90 years. There is equal attendance with males and females, but gender roles and social roles differ. Most attendees are Christian, and a daily prayer is held before meals. However, religious affiliation differs and includes Catholic, Baptist, Methodist, and other denominations. Health and function level diversity is present. Some are independent and drive themselves to the center, and others use the community-agency bus or friends for transportation. Several attendees use assistive device such as, walkers or a cane while others are active in exercise class without assistance. Also, educational levels, individual learning styles,

and openness to learning vary. The older adults are discerning with their time, and it has been noted with past post-lunch educational presentations that the majority choose to stay for activities.

EBP Intervention

The project implemented a community-based education program at the senior center in a small town in northwest Missouri. Recruitment for the sample group began in August 2016 by advertising the program at the senior center, area pharmacies, county health department, and the local primary care clinic. The student investigator displayed posters, introduced the program by dialoguing with center clients, and asked senior center administration to mention the program in announcements and newsletters. Participation in the program was voluntary, and participants were invited to all sessions or they could choose to attend those of interest. The intervention consisted of five educational sessions. Consent to participate in the research study was obtained and the pre-test survey was given at the beginning of the first session. The post-test survey was given at the end of the fifth session (see Appendix F for Intervention Flow Diagram).

The timeline for the project spanned a 3-month period starting in September 2016. Two sessions were offered in September and in October, and one session in November. Each session had a different topic: fall prevention, heart health, preventative care, medication safety, and proactive health practices. The sessions were presented following lunch at the center (1200-1230) and lasted approximately 20 minutes. Ten minutes were allotted for questions after each education presentation. (see Appendix G for Project Timeline).

The student investigator led the project, but had 12 nursing students assisting with the intervention. The students were seniors participating in their community health capstone rotation. Students received education about older adult health needs before visiting the senior

center. The student investigator obtained consent from participants, collected pre- and post-tests, and led the main education sessions. The nursing students worked with participants at their tables in small groups to complete short educational activities during the main sessions (see Appendix F for Intervention Flow Diagram).

Change Process and EBP Model

Kotter and Cohen's Model of Change supports the implementation of the intervention, provides clear steps to the change process, and drives change by using emotional appeal (Melnyk & Fineout-Overholt, 2015). The use of emotional appeal was a major component to drive motivation for the intended audience to participate in educational sessions, and for nursing students to be involved with the project. Kotter and Cohen's model emphasizes the establishment of short-term successes which can be accomplished by evaluating each individual session, and the momentum was used to propel the energy toward the overall program. The evidence supporting community-based health promotion programs recommends planning for success and sustainability. This change model complemented these directives in steps seven and eight with ongoing persistence and nourishment.

The Iowa Model of Evidence-Based Practice guided the EBP project. This model has been used to address various clinical topics, and the algorithm is easy to follow (Melnyk & Fineout-Overholt, 2015). The project was a pilot project, and the model gave guidance on the feasibility process and dissemination (Melnyk & Fineout-Overholt, 2015).

Study Design

The study design was a pilot, quasi-experimental, one group, with pre- post-test format using the Health Promotion Lifestyle Profile II questionnaire.

Validity

The evidence-based practice project design presented challenges in establishing a relationship between the intervention and outcome. Although the project had a weaker study design, strategies were implemented to strengthen the internal validity. Threats to internal validity include history, maturation, and testing/instrumentation.

As the project took place over a short period of 3 months, and the pre- and post-test were given approximately 9 weeks apart, history or maturation did not pose a great risk. Participant answers on the posttest may have been influenced by taking the pre-test, and the pre-test may have caused a change to occur versus the intervention alone. The threat caused by testing and instrumentation was acknowledged, but could not be lessened related to the short time span between pre- and post-testing.

The project's quasi-experimental design used a convenience, non-randomized, self-selected sample of older adults attending the local senior center during each session. Recruitment was performed to draw larger audiences to sessions. This sample selection process threatened the project's external validity, however, the proposed sample group included Caucasian, male and female, rural-based, community-dwelling older adults aged 60 years and older living with chronic disease. The sample represents the larger US older adult population, and exemplifies many older adults coping with chronic disease and living in rural communities.

Outcomes

The outcome of wellness lifestyle promotion was measured by the Health Promotion Lifestyle Profile II questionnaire during the first session and last session. The demographics of age and gender were collected on the Health Promotion Lifestyle Profile II (see Appendix H for Outcomes and Measurement Tools).

Measurement Instruments

The measurement instrument used in the project was the Health Promoting Lifestyle Profile II. The Health Promoting Lifestyle Profile II designed by Walker, Sechrist, & Pender (1987) and revised by Walker and Hill-Polerecky (1996) is a 52-item Likert-style survey used to calculate a score for overall health-promoting lifestyle. The survey has six subscales: health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management. It is in paper form and takes approximately 10 minutes to complete. It has a test-retest reliability of .892 after a 3-week interval, and Cronbach's alpha total scale of .943 with subscales ranging .793-.872. Construct validity was confirmed by factor analysis and convergence with the Personal Lifestyle Questionnaire of ($r = .678$), and criterion validity was addressed by significant correlations with concurrent measures of perceived health status and quality of life ($r = .269 - .491$). Permission to use the Health Promoting Lifestyle Profile II was granted to the student investigator (see Appendix F for Outcomes and Measurement Tools) (see Appendix I for Permission Statement).

Quality of Data

The project was a pilot with one group, which was less than 30 participants and a power analysis was not conducted. The project employed a convenience sampling, and the sample size was dependent on the number of older adults attending the senior center on the days the sessions were offered, and the choice of the older adult to participate in the project. A sample of 20-25 is recommended for pilot studies evaluating intervention effectiveness of a single group (Herzog, 2008). The goal was to have at least 20 participants at each session.

Data collected through the Health Promoting Lifestyle Profile II was compared to past studies using this instrument in the older adult population (Walker et al, 1998; White & Nezey, 1996). The project findings were compared to existing literature that found increased adoption

of healthy behaviors in community-dwelling older adults after participating in community-based health promotion programs (see Appendix J for Data Collection Template).

Analysis Plan

The data collected during the project included ratio and interval variables. Scores of the Health Promoting Lifestyle Profile II were represented as interval data. Scores collected from the initial and post Health Promoting Lifestyle Profile II (HPLPII) were entered into IBM SPSS Software. A Wilcoxon Matched-Pairs test was performed to discern if a statistical difference, at .05, was noted between the pre and post Health Promoting Lifestyle Profile II.

Results

Setting & Participants

The setting was a local senior center over three-months during fall 2016. The sample (N=5) included, one male and four female participants, ages 60s-80s.

Intervention Course

The education program had 5 sessions which began in September 2016. Two sessions were offered in September and in October, and one session in November. Each session had a different topic: fall prevention, heart health, preventative care, medication safety, and proactive health practices. The sessions were presented following lunch at the center and lasted approximately 20 minutes. Ten minutes were allotted for questions after each education presentation. Twelve undergraduate nursing students assisted with the program by interacting with participants at tables during brief small group discussions, and activities during the main sessions. The student investigator led all 5 main education sessions, obtained consent from participants, collected HPLPII pre-tests during the first session, and HPLPII post-tests at the last

session. There was an average of 21 participants at each session with a total of 128 participants over the five sessions.

Outcome Data

A Wilcoxon Matched-Pairs test was used to analyze the HPLPII total and subscale pre-test and post-test scores. IBM SPSS Software was used to perform the analysis. HPLPII pre- and post-survey total scores and subscale scores were not statistically significant. The total HPLPII pre-survey score was 3.22 and post-survey score was 3.10. There was a small increase in the subscales of Health Responsibility (3.18 to 3.24) and Spiritual Growth (3.34 to 3.44); (see Appendix K for Statistical Analysis Results Table).

Discussion

Successes

Although the HPLPII total and subscales scores were not statistically significant, the scores indicated consistent healthy lifestyles behaviors during the program. Participants stated they enjoyed the program with many commenting to the student investigator that the sessions were informative and helped them maintain their health.

Study Strengths

The study was strengthened by the extensive planning and preparations for the project. The senior center and university administration were instrumental to the project success by their support and in-kind donations. Gaining understanding about the target audience prior to project planning helped the student investigator design the program to meet older adult needs. All project aspects were designed with them in mind, including scheduling, length, topics, and appearance of sessions and materials. Holding the educational program at the senior center after lunch increased the likelihood of gaining participants for the project. By developing a well-

organized implantation plan, project implementation flowed smoothly with the consenting process, the completion of surveys, and session presentations. All sessions were presented as scheduled without any untoward issues.

Results Compared to Evidence in the Literature

This project aimed to explore older adults' overall health-promoting lifestyle after participating in Wellness Promotion in Community-dwelling Older Adults Project education sessions. Published studies have shown that community-based health promotion programs benefit older adult health. The current project findings showed the total HPLPII pre-survey score was 3.22 and post-survey score was 3.10; showing consistent healthy lifestyles behaviors during the program. Older adults have higher healthy lifestyle scores than younger age groups (Becker & Arnold, 2004; Walker, Volkan, Sechrist, & Pender, 1988). Becker & Arnold (2004) noted a mean of 2.82 on the HPLPII survey, and Walker et al. (1988) noted a mean of 2.88 on the HPLPI survey. In comparison, this project's sample group demonstrated higher pre-score and post-score medians. Overall, these findings show community-based health promotion programs assist older adults in staying healthy.

Limitations

Internal validity effects. The student investigator strived to strengthen the project's design to decrease internal validity effects. The threats of history and maturation were reduced by the short period of the project. The instrumentation may have affected the project's outcomes. While the HPLPII is deemed a valid and reliable measurement tool, the tool length of 52 items was burdensome for the participants. Although 14 older adults consented to participate in the project, only five completed both the pre- and post-test completely. The student investigator modified the HPLPII by increasing the font size for ease of reading; however, this

increased the number of pages per tool. It was noted that entire pages were missed on several pre- and post-tests. In some cases, the HPLPII was started, but not finished. Nine surveys were not completed, and the data was not used in the study analysis.

External validity effects. The project's quasi-experimental design used a convenience, non-randomized, self-selected sample of older adults attending the senior center which threatened the generalization of the findings. The sample group included Caucasian, male and female, rural-based, and community-dwelling older adults aged 60 years and older living with chronic disease. The homogeneous sample represents the rural-dwelling, Midwestern older adult population coping with chronic disease. The findings may not be applicable to older adult populations with increased cultural diversity and living in urban areas.

Sustainability of effects and plans to maintain effects. The project's effects may weaken over time since participants are not exposed to health promotion education. Plans are in place to continue the program annually each fall in collaboration with the university and the senior center. Funding and further collaboration with area agencies will be sought to support the project's sustainability and growth. It is hoped with continued offerings a larger audience may be served with expansion into neighboring communities within the Northwest Missouri and Northeast Kansas regions.

Efforts to minimize the study limitations. The student investigator attempted to minimize study limitations through the project's design, revision of the HPLPII tool's font for ease of reading, and directing a thorough recruitment campaign. Despite these efforts, the study had several limitations: the use of a convenience sample, a small homogeneous sample, HPLPII low completion rate, and decreased generalizability. Even with these limitations, the findings lend insight into the health status of rural-dwelling older adults in the Midwest. These findings

will be used to guide the future implementation of the program, and support further evidence-based practice implementation focusing on older adult health promotion.

Interpretation

Expected and actual outcomes. It was anticipated that the study outcomes would show a statistically significant increase in the adoption of healthy lifestyle behaviors after participants attended the education program. The actual results did not show an increase, but revealed consistency between the pre- and post-test scores. Becker and Arnold (2004) and Walker et al., (1988) noted older adults have higher HPLPII scores than other age groups. In comparison, study findings showed high-level HPLPII pre- and post-test scores which surpassed scores presented by Beck and Arnold (2004) and Walker et al., (1998).

There could be several reasons for the differences between anticipated and actual outcomes. First, participants may have encountered problems completing the HPLPII tool which may have led to a small sample group with less than optimal data for analysis. Second, the participants' level of health knowledge and behaviors were higher than expected, inhibiting significant change between pre- and post-test scores.

Intervention's Effectiveness

The intervention's effectiveness was promoted through detailed planning and by presentation at a community location frequented by older adults. The senior center offers educational sessions or entertainment daily after lunch. This provided a prime setting and audience for the education sessions and data collection. Displaying information for the program one month in advance raised awareness, and sustained participation. The education sessions were designed for the senior center audience. The presentations were presented at mid-day, limited to 30 minutes, and discussed health topics important to older adults.

Intervention Revision

Several revisions of the intervention may foster participation and data collection. Data collection methods would be modified to gain a larger sample size and data for analysis.

Although the HPLPII has been used in the older adult population, issues were noted with use of the tool in the project. The student investigator enlarged the font of the HPLPII pre- and post-test to assist with participants' ease of reading. This increased the number of pages which may have caused participants to miss whole pages, test items, and/or not complete the HPLPII.

Revision would include providing participants the original three-page HPLPII, and only offer the HPLPII with larger font to those indicating a need for larger print. The participants would be asked to double check for completeness before submitting to the student investigator. Some participants were unable to attend both the first and last sessions; therefore, no post-test was completed. Revision may include mailing the post-test with a return envelope to participants missing the final session.

Expected and actual impact to health system, costs, and policy. Community-based health promotion programs have been noted to decrease hospital admissions, emergency department visits, and physician visits (Barnason, Zimmerman, & Youn, 2012; Cohen et al., 2006; Kaczorowski, 2011; Lorig et al., 2001). The participants' higher-level HPLPII scores indicate they have healthy lifestyles; however, these findings cannot be directly connected with reduced use of healthcare resources. This project reveals the positive impact of community-based health promotion programs on older adults' healthy lifestyle maintenance, and supports initiatives to implement future programs.

The project costs were estimated at \$5500 (see Appendix E for Cost Table for Project). The actual costs of the project were less, as supply costs were covered through in-kind donations

from the university. This allowed a savings of \$400, which decreased overall project expenses to \$5100. Although funding was sought to cover the three \$50 gift cards, no funding was granted. The student investigator purchased them out-of-pocket. In the future, the project will need financial funding to support sustainment. With continued collaborative efforts between the university and senior center, the project would be implemented annually. Funding support from grants or other collaborative partners would enable the project to be offered biannually and at other community locations.

Conclusions

The population of CDOA is growing exponentially, placing pressure on the healthcare system to provide for their wellness needs (Census.gov, 2016; NCOA, 2014). A review of the evidence shows community-based health promotion programs designed for CDOA provide a variety of benefits. They can support CDOA's efforts in adopting health promoting lifestyle behaviors and sustaining wellness. This cumulative evidence acts as a firm foundation to support continued implementation of community-based health promotion programs.

Practical Usefulness of the Intervention

Older adults living in Andrew County Missouri did not have access to an evidence-based wellness program. The EBP Wellness Promotion in Community-dwelling Older Adults Project addressed this deficit, and assisted this population in adopting health promoting lifestyle behaviors and in sustaining wellness.

Further Study of Intervention

While the literature shows the benefits of health promotion programs, much of the research is composed of small cohort analytical studies. Most programs were not standardized, and did not address comprehensive health. Studies were time limited with little evidence of

sustainability or long-term health maintenance in the populations served. Future research or evidence-based practice projects are recommended to determine long-term adoption of health-promoting lifestyle habits, and factors associated with maintaining those habits.

This project could be replicated in an urban setting to compare the adoption of healthy lifestyles between rural and urban populations. Researching the connection between the intervention and rates of hospitalization, physician visits, and emergency department use may be helpful in demonstrating effects on healthcare costs.

Dissemination

The plan for dissemination of the project findings include a poster presentation at the 2017 Evidence-Based Nursing Conference, *Transforming Nursing: Building A Culture of Innovation* in Wichita Kansas in April 2017. A podium presentation will be given at the International Conference on Nursing Science & Practice, *Advancement of Nursing Science through Research, Practice and Education* in Dallas Texas in June 2017. These presentations support existing literature showing the benefits of community-based health promotion programs, and provides an evidence-based approach to foster future older adult community health initiatives.

References

- Administration for Community Living. (2015). *Administration on Aging health, prevention, and wellness programs*. Retrieved from http://www.aoa.acl.gov/AoA_Programs/HPW/index.aspx
- Albert, S. M., King, J., Boudreau, R., Prasad, T., Chyongchiou J. Lin, & Newman, A. B. (2014). Primary prevention of falls: Effectiveness of a statewide program. *American Journal of Public Health, 104*(5), e77–e84. <http://doi.org/10.2105/AJPH.2013.301829>
- Aselton, P. (2011). Using a wellness program in public housing for community nursing clinical experiences. *Journal of Nursing Education, 50*(3), 163–166 4p. <http://doi.org/10.3928/01484834-20100930-05>
- Barnason, S., Zimmerman, L., & Young, L. (2012). An integrative review of interventions promoting self-care of patients with heart failure. *Journal of Clinical Nursing, 21*(3-4), 448–475. <http://doi.org/10.1111/j.1365-2702.2011.03907.x>
- Becker, C., & Arnold, W. (2004). Health Promoting Behaviors of Older Americans Versus Young and Middle Aged Adults. *Educational Gerontology, 30*(10), 835–844. <https://doi.org/10.1080/03601270490507277>
- Belza, B. (2007). *Moving ahead: Strategies and tools to plan, conduct, and maintain effective community-based physical activity programs for older adults*. Centers for Disease Control and Prevention: Atlanta, Georgia.
- Belza, B., Shumway-Cook, A., Phelan, E. A., Williams, B., Snyder, S. J., & LoGerfo, J. P. (2006). The effects of a community-based exercise Program on function and health in

- older adults: The EnhanceFitness program. *Journal of Applied Gerontology*, 25(4), 291–306. <http://doi.org/10.1177/0733464806290934>
- Bollinger, R. L., Waugh, P. F., & Zatz, A. F. (1977). *Communication management of the geriatric patient*. Danville, IL: Interstate Printers & Publishers.
- Brady, T. (2015). *Marketing Chronic Disease Self-Management programs*. (n.d.). Retrieved from <https://www.ncoa.org/resources/webinar-marketing-cdsme-using-the-personal-touch-to-put-butts-in-seats/>
- Bryant, L. L., Altpeter, M., & Whitelaw, N. A. (2006). Evaluation of health promotion programs for older adults: An introduction. *Journal of Applied Gerontology*, 25(3), 197–213. <http://doi.org/10.1177/0733464806288562>
- Buchner, D. M., & Pearson, D. C. (1989). Factors associated with participation in a community senior health promotion program: a pilot study. *American Journal of Public Health*, 79, 775-777.
- Cafer, A., Dawdy, J., Foulkes, M., Heflin, C., Hermsen, J., Kaiser, M., ... & Scott, J. (2013). *Missouri hunger atlas 2013*. Retrieved from http://foodsecurity.missouri.edu/wp-content/uploads/2013/09/Missouri-Hunger-Atlas-2013-Full-Report_UR.pdf
- Centers for Disease Control and Prevention (CDC). (2009). *Improving health literacy for older adults: Expert panel report 2009*. Atlanta: US Department of Health and Human Services.
- Centers for Disease Control and Prevention (CDC). (2013). *Healthy aging data portfolio web site*. http://nccd.cdc.gov/DPH_Aging/default.aspx.
- Centers for Disease Control and Prevention (CDC). (2014). *Stats of the state of Missouri*. Retrieved from http://www.cdc.gov/nchs/pressroom/states/mo_2014.pdf

- Centers for Disease Control and Prevention (CDC). (2015). *Chronic disease prevention and health promotion*. Retrieved from <http://www.cdc.gov/chronicdisease/>
- Cohen, G. D., Perlstein, S., Chapline, J., Kelly, J., Firth, K. M., & Simmens, S. (2006). The impact of professionally conducted cultural programs on the physical health, mental health, and social functioning of older adults. *The Gerontologist*, *46*(6), 726–734. <http://doi.org/10.1093/geront/46.6.726>
- Dirnagl & Lauritzen. (2010). Fighting publication bias: introducing the negative results section. *Journal of Cerebral Blood Flow Metabolism*, *30*(7), 1263-1264.
- Engel, R. J., & Kieffer, T. (2008). A comprehensive individual and organizational wellness assessment of older adults. *Seniors Housing & Care Journal*, *16*(1), 83–95. Retrieved from <http://proxy.library.umkc.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=40075646&site=ehost-live&scope=site>
- Federal Interagency Forum on Aging-Related Statistics. (2012). Older Americans 2012: Key indicators of well-being. *Federal Interagency Forum on Aging-Related Statistics*. Washington, DC: U.S. Government Printing Office.
- Fitts, S. S., Won, C. W., Williams, B., Snyder, S. J., Yukawa, M., Legner, V. J., ... Phelan, E. A. (2008). What Is the optimal duration of participation in a community-based health promotion program for older adults? *Journal of Applied Gerontology*, *27*(2), 201–214. <http://doi.org/10.1177/0733464807309188>
- Fox, P. J., Vazquez, L., Tonner, C., Stevens, J. A., Fineman, N., & Ross, L. K. (2010). A randomized trial of a multifaceted intervention to reduce falls among community-

dwelling adults. *Health Education & Behavior*, 37(6), 831–848.

<http://doi.org/10.1177/1090198110366003>

Frieden, T. R. (2010). A framework for public health action: The health impact pyramid.

American Journal of Public Health, 100(4), 590–595.

Frosch D. L., Rincon D, Ochoa S., & Mangione C. M. (2010). Activating seniors to improve chronic disease care: results from a pilot intervention study. *Journal of the American*

Geriatrics Society, 58(8), 1496–1503 8p. <http://doi.org/10.1111/j.1532->

5415.2010.02980.x

Geschwind, N. (1980). Language and communication in the elderly: An overview. In L. K.

Olber & M. L. Albert (Eds.), *Language and Communication in the Elderly* (pp.

205-209). Lexington, MA: Lexington Books.

Gravell, R. (1988). Communication problems in elderly people: Practical approaches to management. London: Nelson Thornes Ltd.

Harari, D., Iliffe, S., Kharicha, K., Egger, M., Gillmann, G., Renteln-Kruse, W. V., ... Stuck, A.

(2008). Promotion of health in older people: a randomised controlled trial of health risk appraisal in British general practice. *Age and Ageing*, 37(5), 565–571.

<http://doi.org/10.1093/ageing/afn150>

Healthy People 2020. (2016). *Older adults*. Retrieved from

<http://www.healthypeople.gov/2020/topics-objectives/topic/older-adults>

Holland, A. L. (1980). Working with the aging aphasic patient: Some clinical implications. In L.

K. Olber & M. L. Albert (Eds.), *Language and Communication in the Elderly* pp. 181-

189). Lexington, MA: Lexington Books.

- Hopman-Rock, M., & Westhoff, M. H. (2002). Development and evaluation of “Aging Well and Healthily”: A health-education and exercise program for community-living older adults. *Journal of Aging and Physical Activity, 10*, 364-381.
- Imamura, E. (2002). Amy's Chat Room: Health promotion programmes for community dwelling elderly adults. *International Journal of Nursing Practice, 8*(1), 61-64.
- Kaczorowski, J., Chambers, L. W., Dolovich, L., Paterson, J. M., Karwalajtys, T., Gierman, T., ... Sebaldt, R. J. (2011). Improving cardiovascular health at population level: 39 community cluster randomised trial of Cardiovascular Health Awareness Program (CHAP). *BMJ: British Medical Journal, 342*(7794), 422–422. Retrieved from <http://www.jstor.org/stable/20839543>
- Kennedy-Malone, L., Fletcher, K. R., & Martin-Plank, L. (2014). *Advanced practice nursing in the care of older adults*. Philadelphia, PA: F. A. Davis Company.
- Klinedinst, N. J. (2005). Effects of a nutrition education program for urban, low-income, older adults: A collaborative program among nurses and nursing students. *Journal of Community Health Nursing, 22*(2), 93-104.
- Krist, A. H., Shenson, D., Woolf, S. H., Bradley, C., Liaw, W. R., Rothemich, S. F., ... Anderson, L. A. (2013). Clinical and community delivery systems for preventive care: an integration framework. *American Journal of Preventive Medicine, 45*(4), 508–516. <http://doi.org/10.1016/j.amepre.2013.06.008>
- Lis, K., Reichert, M., Cosack, A., Billings, J., & Brown, P. (2008). *Evidence-Based guidelines for older people*. Retrieved from http://www.healthproelderly.com/pdf/HPE-Guidelines_Online.pdf

- Loeb, S. J., O'Neill, J., & Gueldner, S. H. (2001). Health motivation: A determinant of older adults' attendance at health promotion programs. *Journal of Community Health Nursing, 18*(3), 151–165. Retrieved from <http://proxy.library.umkc.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=5209717&site=ehost-live&scope=site>
- Lorig, K. R., Ritter, P., Stewart, A. L., Sobel, D. S., Brown, B. W., Bandura, A., ... Holman, H. R. (2001). Chronic Disease Self-Management Program: 2-year health status and health care utilization outcomes. *Medical Care, 39*(11), 1217–1223. Retrieved from <http://www.jstor.org/stable/3767514>
- Luten K. A., Reijneveld, S. A., Dijkstra, A., & Winter, A. F. (2015). Reach and effectiveness of an integrated community based intervention on physical activity and healthy eating of older adults in a socioeconomically disadvantaged community. *Health Education Research, 31*(1), 98–106
- Matthews, R. L., Parker, B., & Drake, S. (2012). HEALTHY AGER: An interprofessional, service-learning, town-and-gown partnership. *Nursing Education Perspectives, 33*(3), 162–165 4p. <http://doi.org/10.5480/1536-5026-33.3.162>
- Melnyk, B. M., & Fineout-Overholt, E. (2015). *Evidence-based practice in nursing and healthcare: A guide to best practice* (3rd ed.). Philadelphia, PA: Wolters Kluwer Health.
- Miller, C. A. (2012). *Nursing for wellness in older adults*. Philadelphia, PA: Wolters Kluwer Health-Lippincott Williams & Wilkins.
- Missouri Department of Health and Senior Services. (2007). Diabetes related mortality in Missouri. *Focus*. Retrieved from http://health.mo.gov/data/focus/pdf/FOCUS_Mar07.pdf

- Narushima, M., Liu, J., & Diestelkamp, N. (2013). Motivations and perceived benefits of older learners in a public continuing education program: Influence of gender, income, and health. *Educational Gerontology, 39*(8), 569–584.
<http://doi.org/10.1080/03601277.2012.704223>
- National Council on Aging (NCOA). (2014). *Healthy aging facts*. Retrieved from
<https://www.ncoa.org/news/resources-for-reporters/get-the-facts/healthy-aging-facts/>
- Newman, D. (2005). A community nursing center for the health promotion of senior citizens based on the Neuman Systems Model. *Nursing Education Perspectives, 26*(4), 221-223.
- Ogden, L. L., Richards, C. L., & Shenson, D. (2012). Clinical preventive services for older adults: The interface between personal health care and public health services. *American Journal of Public Health, 102*(3), 419–425. <http://doi.org/10.2105/AJPH.2011.300353>
- Park, J. S. (2004). [The effects of an elderly health promotion program on health promotion lifestyles, health status and quality of life in the elderly]. *Taehan Kanho Hakhoe Chi, 34*(7), 1194–1204.
- Pender, N. (2011). *The health promotion model manual*. Retrieved from
https://deepblue.lib.umich.edu/bitstream/handle/2027.42/85350/HEALTH_PROMOTION_MANUAL_Rev_5-2011.pdf
- Peterson, S. J., & Bredow, T. S. (2004). *Middle range theories: Application to nursing research*. Philadelphia, PA: Lippincott Williams & Wilkins.
- Pogge, E. K., & Eddings, L. (2013). Effect of a 12-Week Nutrition and Wellness Program in Independent Living Seniors. *Journal of Nutrition Education and Behavior, 45*(5), 471–472. <http://doi.org/10.1016/j.jneb.2013.01.014>

- Quad Council of Public Health Nursing Organizations. *Quad council competencies*. Retrieved from
http://www.achne.org/files/quad%20council/quadcouncilcompetenciesforpublichealthnurses.pdf
- Robare, J. F., Bayles, C. M., Newman, A. B., Williams, K., Milas, C., Boudreau, R., ... Kuller, L. H. (2011). The “10 Keys” to healthy aging 24-month follow-up results from an innovative community-based prevention program. *Health Education & Behavior, 38*(4), 379–388. <http://doi.org/10.1177/1090198110379575>
- Storandt, M. (1980). Verbal memory in the elderly. In L. K. Olber & M. L. Albert (Eds.), *Language and Communication in the Elderly* (pp. 27-36). Lexington, MA: Lexington Books.
- Tai-Seale, M., McGuire, T. G., and Zhang, W. (2007). Time allocation in primary care office visits. *Health Services Research, 42*(5), 1871-1894.
- Travis, J. W., & Ryan, R. S. (2004). *Wellness workbook: How to achieve enduring health and vitality* (3rd ed.). New York, NY: Ten Speed Press.
- Truncali A., Dumanovsky T., Stollman H., & Angell S. Y. (2010). Keep on track: a volunteer-run community-based intervention to lower blood pressure in older adults. *Journal of the American Geriatrics Society, 58*(6), 1177–1183 7p. <http://doi.org/10.1111/j.1532-5415.2010.02874.x>
- United States Census Bureau. (2016). *State and county quickfacts*. Retrieved from
<http://quickfacts.census.gov/qfd/states/29/29003.html>
- Walker, S. N., & Hill-Polerecky, D.M. (1996). *Psychometric evaluation of the Health-Promoting*

- Lifestyle Profile II*. Unpublished manuscript, University of Nebraska Medical Center.
Retrieve from http://www.unmc.edu/nursing/docs/HPLPII_Abstract_Dimensions.pdf
- Walker, S. N., Sechrist, K. R., Pender, N. J. (1987) The Health-Promoting Lifestyle Profile: Development and Psychometric Characteristics. *Nursing Research* 36, 76-81.
- Walker, S. N. E., Volkan, K. E., Sechrist, K. R., & Pender, N. J. (1988). Health-promoting life styles of older adults: Comparisons with young and middle-aged adults, correlates and patterns. *Advances in Nursing Science*, 11(1), 76–90.
- Wallace, R., Lees, C., Minou, M., Singleton, D., & Stratton, G. (2014). Effects of a 12-week community exercise programme on older people. *Nursing Older People*, 26(1), 20–26 7p.
Retrieved from
<http://proxy.library.umkc.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=104016162&site=ehost-live&scope=site>
- White, J. A. (2011). Sustaining health development: Assessment of a low-cost, non-denominational, faith community-based health promotion program. *International Journal of Health, Wellness & Society*, 1(1), 13–26. Retrieved from
<http://proxy.library.umkc.edu/login?url=http://search.ebscohost.com/login.aspx?direct=>
- White, J., & Nezey, I. O. (1996). Project Wellness: A collaborative health promotion program for older adults. *Nursing Connections*, 9(1), 21-27.
- Wissmann, J. L., & Wilmoth, M. C. (1996). Meeting the learning needs of senior citizens and nursing students through a community-based pharmacology experience. *Journal of Community Health Nursing*, 13(3), 159. Retrieved from
<http://proxy.library.umkc.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=7450883&site=ehost-live&scope=site>

World Health Organization (WHO). Definition of health. Retrieved from <http://www.who.int/en/>

Wright, T., & Hyner, G. C. (2011). Older adult participation in health promotion programs: perspectives of facility administrators. *Educational Gerontology, 37*(12), 1030–1039 10p.
<http://doi.org/10.1080/03601277.2010.492734>

Appendix A

Synthesis of Evidence Table

Authors	Title/Journal	Year of Pub	Purpose	Design & Level of Evidence (Melnyk)	Sample size	Notes/Strengths & Limitation
OLDER ADULT WELLNESS INTERVENTIONS						
Buchner, David M. Pearson, David C.	Factors associated with participation in a community senior health promotion program: a pilot study. American Journal of Public Health; June 1989, Vol. 79, p775-777, 3p	1989	Factors associated with older adults participating in a community health promotion program	Cohort study. Level 4	N = 634	Those with lower social and mental health status had increased participation in programs.
Wissmann, Jeanne L. Wilmoth, Margaret	Meeting the Learning Needs of Senior Citizens and Nursing Students Through a Community-Based Pharmacology Experience Journal of Community Health Nursing. 1996, Vol. 13 Issue 3, p159. 7p.	1996	Education/service-learning intervention to assist older adults and nursing students learn about medications.	Cohort Analytical study of 2 populations. with certain patient interactions. Level 4	The sample included undergraduate NS enrolled in community health course. 24 community dwelling older adults	NS and CDOA enjoyed the experience. Demonstrated positive results from collaboration between nursing academia and community agencies CDOA wellness was enhanced.

White, Jerry & Nezey I. O	Project Wellness: A collaborative health promotion program for older adults Nursing Connections vol 9 #1 1996	1996	Describes a community-based health promotion project at a local senior center: planning, implementation, and evaluation.	Cohort Analytic study. Pre and posttest. Used Health Promoting Lifestyle Profile, BP, total CHOL, weight, tricept skinfold thickness. Level 4	22 CDOA	Significant difference in total Health Promoting Lifestyle Profile score and sub-scale of Health Responsibility scores. Decreases in BP were significant. Participants felt the project was positive. All attended each session. Good rapport with those presenting project, and convenient location helped with attendance and engagement.
Lorig, Kate R. Ritter, Philip Stewart, Anita L. Sobel, David S. Brown, Byron William Bandura, Albert Gonzalez, Virginia M. Laurent, Diana D.Holman, Halsted R.	Chronic Disease Self-Management Program: 2-Year Health Status and Health Care Utilization Outcomes Medical Care Volume 39 Issue 11 Pages 1217-1223	2001	Follow-up study of the Chronic Disease Self-Management Program	Longitudinal design as follow-up to a randomized trial. Abstract only. Level 2.	831 participants	ER/outpatient visits decreased. Health distress decreased. Self-efficacy increased.

Loeb, Susan J.1 O'Neill, Jacquelyn2 Gueldner, Sarah Hall	Health Motivation: A Determinant of Older Adults' Attendance at Health Promotion Programs Journal of Community Health Nursing. Fall2001, Vol. 18 Issue 3, p151-165. 15p	2001	Assessed if self-motivated older adults were more likely to attend health promotion programs	Cohort Descriptive Study. Level 6	106 CDOA	Older adults who were extrinsically motivated attended more programs. Older adults with lower education attended more programs. Older adults who were intrinsically motivated attended less programs.
Imamura, Emiko	Amy's Chat Room: Health promotion programmes for community dwelling elderly adults. International Journal of Nursing Practice. Jan2002, Vol. 8 Issue 1, p61-64. 4p.	2002	Describes a community educational/service learning intervention designed for CDOA.	Cohort Analytical study. Level 4	22 interview; 55 health promotion program; 18 in both	Older adults reported increased knowledge and awareness of disease prevention, and positive lifestyle changes.

Hopman-Rock, M. & Westhoff, M. H.	Development and evaluation of "aging well and healthily": A health-education and exercise program for community-living older adults Journal of Aging and Physical Activity 10 364-381	2002	Evaluated the effect on physical health and general health of participants	Small RCT and community intervention trial. Level 2	N=71	Older adults reported attending program to exercise, learn about their health, and to be social. Improved physical activity levels and increased participation in exercise classes.
Newman, Diana M. L.	A Community Nursing Center for the Health Promotion of Senior Citizens Based on the Neuman Systems Model Nursing Education Perspectives. Jul/Aug2005, Vol. 26 Issue 4, p221-223. 3p	2005	Service/educational learning experience with nursing students	Descriptive study of intervention. Level 6	400 CDOA.	The center and activities had a positive effect on older adult health

Klinedinst, N. Jennifer	Effects of a Nutrition Education Program for Urban, Low-Income, Older Adults: A Collaborative Program Among Nurses and Nursing Students Journal of Community Health Nursing. Summer2005, Vol. 22 Issue 2, p93-104. 12p. 3 Charts	2005	Evaluate outcomes of nutrition of older adults participating in the program	Cohort Analytic study. Level 4	25 older adults	Older adults had increased knowledge about nutrition after program.
Cohen, Gene D. Perlstein, Susan Chapline, Jeff Kelly, Jeanne Firth, Kimberly M. Simmens, Samuel	The Impact of Professionally Conducted Cultural Programs on the Physical Health, Mental Health, and Social Functioning of Older Adults the Gerontologist (2006) 46 (6): 726-734.	2006	Evaluation of program effects on older adult health	Case Control Study. Level 4	N =166	Improvements realized in physical health, fewer doctor visits, less medication use, less falls, and lessening of health problems than the comparison group. Decrease in loneliness. Increase in physical activity.

Bryant, Lucinda L. Altpeter, Mary Whitelaw, Nancy A.	Evaluation of Health Promotion Programs for Older Adults: An Introduction Journal of Applied Gerontology June 2006 vol. 25 no. 3 197-213	2006	Informational article about health promotion programs for older adults.	Discussed the need for systematic evaluation of health programs. RE-AIM. level 7	No sample	Assessment and evaluation is needed when planning and implementing programs.
--	--	------	---	--	-----------	--

Belza, Basia Shumway-Cook, Anne Phelan, Elizabeth A. Williams, Barbara Snyder, Susan J. LoGerfo, James P	The Effects of a Community-Based Exercise Program on Function and Health in Older Adults: The EnhanceFitness Program Journal of Applied Gerontology August 2006 vol. 25 no. 4 291-306	2006	This study examined the effectiveness of participation in EnhanceFitness program.	Cohort Analytic Study. Level 4	N=2889 older adults	Used contact with CDOA at senior center to recruit. Improved physical function was noted.
--	---	------	---	--------------------------------	---------------------	---

Danielle Harari ¹ , Steve Iliffe, Kalpa Kharicha, Matthias Egger, Gerhard Gillmann, W. Von Renteln-Kruse, John Beck, Cameron Swift and Andreas Stuck	Promotion of health in older people: a randomised controlled trial of health risk appraisal in British general practice <i>Age Ageing</i> (2008) 37 (5): 565-571	2008	Evaluation of health behavior and health prevention measures of older adults.	RCT Level 2	N=2,006 randomized, intervention n = 940 control n = 1,066	Increased pneumococcal vaccination physical activity levels.
Engel, Reed J. Kieffer, Tessa	A Comprehensive Individual and Organizational Wellness Assessment of Older Adults <i>Seniors Housing & Care Journal</i> . 2008, Vol. 16 Issue 1, p83-95.	2008	Wellness tool development	Cohort Analytical Study. Level 4	There were 259 completed surveys (n = 47) of the sample attended one of the HAWA results review sessions	Emotional and social dimensions had the strongest relationships with overall life satisfaction

<p>Fitts, Sally Sizer Won, Chang Won Williams, Barbara Snyder, Susan J. Yukawa, Michi Legner, Victor J. LoGerfo, James P. Phelan, Elizabeth A</p>	<p>What Is the Optimal Duration of Participation in a Community-Based Health Promotion Program for Older Adults? <i>Journal of Applied Gerontology</i> April 2008 vol. 27 no. 2 201-214</p>	<p>2008</p>	<p>Evaluated timing of health promotion programs with benefit to older adults</p>	<p>Cohort Analytical Study. Level 4</p>	<p>N=355.</p>	<p>6-months was found to be beneficial time frame.</p>
<p>Frieden, Thomas R.</p>	<p>A Framework for Public Health Action: The Health Impact Pyramid <i>Am J Public Health</i>. 2010 April; 100(4): 590–595.</p>	<p>2010</p>	<p>Discussed framework for public health</p>	<p>Describe framework and how to implement programs and interventions based on it. Level 7</p>	<p>No sample</p>	<p>Encourages broad changes and interventions to make the largest impact.</p>

Truncali A; Dumanovsky T; Stollman H; Angell SY	Keep on track: a volunteer-run community-based intervention to lower blood pressure in older adults Journal of the American Geriatrics Society (J AM GERIATR SOC), Jun2010; 58(6): 1177-1183.	2010	Evaluated program to help older adults control blood pressure	Cohort Analytic study. Level 4	244 participants enrolled in the program.	Reductions in systolic and diastolic blood pressure were noted.
---	---	------	---	--------------------------------	---	---

Frosch DL; Rincon D; Ochoa S; Mangione CM	Activating seniors to improve chronic disease care: results from a pilot intervention study Journal of the American Geriatrics Society (J AM GERIATR SOC), Aug 2010; 58(8): 1496-1503	2010	Evaluated program to help older adults with chronic disease	Cohort Analytical Study. Level 4	N=116	Increase in attendance at screenings, physical activity level, and better health for increased quality of life.
---	---	------	---	-------------------------------------	-------	--

Fox, Patrick J. Vazquez, Laurie Tonner, Chris Stevens, Judy A. Fineman, Norman Ross, Leslie K.	A Randomized Trial of a Multifaceted Intervention to Reduce Falls Among Community-Dwelling Adults Health Educ Behav December 2010 vol. 37 no. 6 831-84	2010	Evaluation of program on reduction of falls	RCT. Level 2	288= intervention; 264= control	Decreased number of falls over 12 month period
---	--	------	---	--------------	---------------------------------------	---

Aselton, Pamela	Using a Wellness Program in Public Housing for Community Nursing Clinical Experiences Journal of Nursing Education (J NURS EDUC), Mar2011; 50(3): 163-166. (4p)	2011	Description of a wellness program for older adults	Descriptive study. Level 6	Healthy older adults, individuals with physical or mental handicaps, and multicultural	Positive effects on older adults and nursing students
-----------------	---	------	--	----------------------------	--	---

White, James A.	Sustaining Health Development: Assessment of a Low-cost, Non-denominational, Faith Community-Based Health Promotion Program International Journal of Health, Wellness & Society. 2011, Vol. 1 Issue 1, p13-26. 14p.	2011	Evaluation of health promotion program that was faith-based	Cohort Analytical study with Cross-sectional study design. Level 4	106 adults	Improved physical function and social function
Kaczorowski, J. et al.	Improving cardiovascular health at population level: 39 community cluster randomized trial of Cardiovascular Health Awareness Program (CHAP) BMJ: British Medical Journal Vol. 342, No. 7794 (19 February 2011), p. 422 ABSTRACT ONLY	2011	Evaluation of cardiovascular health promotion program for older adults	RCT. Level 2	39 community clusters	Decreased hospitalizations related to cardiovascular causes were noted.

Wright, Tim; Hyner, Gerald C.	Older Adult Participation in Health Promotion Programs: Perspectives of Facility Administrators Educational Gerontology (EDUC GERONTOL), Dec2011; 37(12): 1030-1039	2011	Describes administration perspectives on older adult attendance of health promotion programs	Expert opinion. Level 7	N= 11 subjects	Barriers to attendance included: scheduling issues, physical and mental health issues, a misunderstanding of the health content, and not having enough information about the program.
Robare, Joseph F. Bayles, Constance M. Newman, Anne B. Williams, Kathy Milas, Carole Boudreau, Robert McTigue, Kathleen Albert, Steven M. Taylor, Christopher Kuller, Lewis H.	The "10 Keys" to Healthy Aging: 24-Month Follow-Up Results from an Innovative Community-Based Prevention Program Health Educ Behav August 2011 vol. 38 no. 4 379-388	2011	Evaluated preventative measures taken by older adults	RCT. Level 2	N=389 CDOA	Improvement in LDL levels, bone density screening, pneumonia vaccination, colonoscopy screening, and adherence to medications.
Matthews, Rebecca L.; Parker, Beverly; Drake, Shawn	HEALTHY AGER: An Interprofessional, Service-Learning, Town-and-Gown Partnership. Nursing Education Perspectives (NURS EDUC PERSPECT), 2012; 33(3): 162-165	2012	Evaluation of Healthy Ager program.	Descriptive reflection. Level 6	Nursing students qualitative journal reflections and faculty reflections on lessons learned.	Many students call it the best clinical experience of their program, saying it makes them feel more confident and competent.

Barnason, Susan Zimmerman, Lani Youn, Lufei	An integrative review of interventions promoting self-care of patients with heart failure Journal of Clinical Nursing Volume 21, Issue 3-4, pages 448–475, February 2012	2012	Examined patients' self-management and self-efficacy in managing heart failure.	Integrative review. Level 5	CDOA	Intervention groups had more knowledge and higher related self-care
Ogden, Lydia L., Richards, Chesley L., Shenson, Douglas	Clinical Preventive Services for Older Adults: The Interface Between Personal Health Care and Public Health Services American Journal of Public Health; Mar2012, Vol. 102 Issue 3, p419-425	2012	Discussed needed preventative measures for older adults	Expert opinion. Level 7	None	The community will be a key player in helping older adults understand the importance of preventative health measures

Narushima, Miya, Liu, Jian Diestelkamp, Naomi	Motivations and Perceived Benefits of Older Learners in a Public Continuing Education Program: Influence of Gender, Income, and Health Educational Gerontology; Aug2013, Vol. 39 Issue 8, p569-584,	2013	Evaluation of older adult motivation and benefits of attending health promotion program	Cohort Analytical Study. Level 4	699	Being cognitively, socially and physically active were top motivators for program attendance
Pogge, Elizabeth K. Eddings, Lori	Effect of a 12-Week Nutrition and Wellness Program in Independent Living Seniors Journal of Nutrition Education and Behavior 2013;45:471-472	2013	Evaluation of wellness program effects on nutrition knowledge, blood pressure, and weight of older adults	Cohort Analytical study. Level 4	N=23	Improved nutrition knowledge. No significant changes in weight or BP

Wallace, Ricky; Lees, Carolyn; Minou, Massoumeh; Singleton, Diane; Stratton, Gareth	Effects of a 12-week community exercise programme on older people, Nursing Older People Feb 2014; 26(1): 20-26	2014	Evaluation of an exercise program on older adult health	Case-Control Study. Level 4	42	Increased physical function up to one year later.
Albert, Steven M., King, Jennifer Boudreau, Robert Prasad, Tanushree Chyongchiou J. Lin Newman, Anne B.	Primary Prevention of Falls: Effectiveness of a Statewide Program American Journal of Public Health; May2014, Vol. 104 Issue 5, pe77-e84	2014	Evaluation of program to reduce falls.	Case Control study. Level 4	Intervention n = 814 & comparison n = 1019	Decreased number of falls were noted

Brady, Teresa	Webinar: Marketing CDSME: Using the Personal Touch to Put "Butts in Seats"	2015	To understand the best methods for recruitment of older adults for health promotion programs.	Lit review in webinar format. Level 5	5 projects--arthritis specific & exploring feasibility of SME awareness campaign; 455 participants; 58 focus groups;	Personal touch was most effective at recruitment--with PCPs and participants.
Luten, Karla A. Reijneveld, Sijmen A. Dijkstra, Arie de Winter, Andrea F.	Reach and effectiveness of an integrated community based intervention on physical activity and healthy eating of older adults in a socioeconomically disadvantaged community HEALTH EDUCATION RESEARCH Vol.31 no.1 2016 Pages 98–106	2015	Evaluation of health promotion program on physical activity and nutrition of older adults	Case-Control study. Level 4	430 participants/ 213 control group	Improved transport physical activity

GUIDELINES						
Belza B. and the PRC-HAN Physical Activity Conference Planning Workgroup	(2007). Moving Ahead: Strategies and Tools to Plan, Conduct, and Maintain Effective Community-Based Physical Activity Programs for Older Adults. Centers for Disease Control and Prevention: Atlanta, Georgia.	2007				RE-AIM: Reach, Effectiveness, Adoption, Implementation, Maintenance is an evidence-based method for management of health programs for older adults.
Lis, Katharina Lis Reichert Monika Cosack Alexandra Billings Jenny Brown Patrick	Evidence-Based Guidelines on Health Promotion for Older People; November 2008; http://www.healthproelderly.com/pdf/HPE-Guidelines_Online.pdf	2008	Guidelines for health promotion program development for older adults living in the communities across the EU	EBP guidelines. Europe	HealthPRO elderly project	16 total guidelines

The Quad Council of Public Health Nursing	Quad Council Competencies http://www.achne.org/files/quad%20council/quadcouncilcompetenciesforpublichealthnurses.pdf	2011	Offers guidance to the different competencies needed for nurses working public health. DNP could be noted at the Tier 2 or Tier 3 level. (Tier 2). Design and management of community/population-based health programs.			
Krist AH, Shenson D, Woolf SH, Bradley C, Liaw WR, Rothemich SF, Slonim A, Benson W, Anderson LA	Clinical and community delivery systems for preventive care: an integration framework Am J Prev Med. 2013 Oct;45(4):508-16.	2013	Framework for the coordination of clinical-community resources to improve preventative care for older adults.	CDC supported article that their preventative health platform is based.		

Appendix B
Theory to Application Diagram
Health Promotion Model Applied to Wellness Promotion in Community-dwelling Older Adults Project

Individual Characteristics & Experiences	Behavior-specific Cognitions & Affect	Behavioral Outcomes
--	---------------------------------------	---------------------

Prior related behavior.

Past behaviors and attitudes toward wellness & health self-management.

Perceived benefits of action.

Persons commit to engaging in behaviors from which they anticipate deriving personally valued benefits.

CDOA will adopt wellness knowledge and health self-management if they realize the benefits of this action.

Perceived barriers to action.

Perceived barriers can constrain commitment to action.

Nurses need to be aware of barriers that may prohibit CDOA from receiving wellness knowledge and health self-management.

Perceived self-efficacy.

Greater perceived self-efficacy results in fewer perceived barrier in health behavior adoption.

CDOA who are empowered with wellness knowledge will have improved perceived self-efficacy in health self-management.

Activity-related affect.

Positive emotions or effect of action associated with behavior increases probability of action.

If CDOA receive wellness knowledge in a positive manner, they will be more likely to adopt health promoting behaviors and health self-management.

Interpersonal influences (family, peers, nurses, providers, support, norms)

Person are more likely to adopt health promoting behaviors when significant others model the behavior to occur, expect the behavior to occur, & provide assistance and support to enable the behavior.

Nurses performing community-based health promotion programs can serve as vital influences in assisting CDOA gain wellness knowledge & improve their self-efficacy in managing their health.

Situational influences.

Influences in the external environment can increase or decrease commitment to or participation in health promotion behavior.

CDOA face several challenges that may prevent them from managing their wellness effectively. They have decreased health literacy, decreased access to community-based health promotion programs, functional limitations, and increased complexity in their health regimen. They are discerning consumers of health care, and may not be motivated to attend community-based health promotion programs.

Intermediate competing demands and preferences

Commitment to action is less likely to occur if other demands require immediate attention or if other actions are more attractive.

CDOA may find other commitments or functional limitations override ability to attend community-based health promotion programs. They may lack motivation to attend based on personal beliefs toward health care. Even if they participate in program, they may have competing demands that supersede ability to adopt or make changes for better health.

Commitment to a plan of action.

CDOA will commit to understanding wellness and health self-management.

Health promoting behavior

CDOA will adopt the behavior of learning about wellness and make positive changes toward health self-management.

Personal factors: biological, psychological, sociocultural

Community-dwelling older adults (CDOA) in Andrew County Missouri

Decreased health literacy.

Increased risk of multiple co-morbidities, polypharmacy, safety concerns, lack of preventative care, and lack of wellness knowledge.

Appendix C

IRB Approval Letter

Principal Investigator: Lyla Lindholm
UMKC Health Sciences Building
Kansas City, MO 64108

Protocol Number: 16-242
Protocol Title: Wellness Promotion in Community-Dwelling Older Adults Project
Type of Review: Designated Review

Date of Approval: 08/30/2016

Date of Expiration: 08/28/2017

Dear Dr. Lindholm,

The above referenced study, and your participation as a principal investigator, was reviewed and approved by the UMKC IRB. You are granted permission to conduct your study as described in your application.

Your protocol was approved under Expedited Review Regulatory Criteria at 45 CFR 46.110 or 21 CFT 56.110 under Category #7 as follows: Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

This approval includes the following documents:

Attachments

The ability to conduct this study will expire on or before 08/28/2017 unless a request for continuing review is received and approved. If you intend to continue conduct of this study, it is your responsibility to provide a Continuing Review form prior to the expiration of approval.

This approval is issued under the University of Missouri - Kansas City's Federal Wide Assurance FWA00005427 with the Office for Human Research Protections (OHRP). If you have any questions regarding your obligations under the Board's Assurance, please do not hesitate to contact us.

There are 5 stipulations of approval:

- 1) No subjects may be involved in any study procedure prior to the IRB approval date or after the expiration date. (PIs and sponsors are responsible for initiating Continuing Review proceedings).
- 2) All unanticipated or serious adverse events must be reported to the IRB.
- 3) All protocol modifications must be IRB approved prior to implementation unless they are intended to reduce risk. This includes any change of investigator.
- 4) All protocol deviations must be reported to the IRB.
- 5) All recruitment materials and methods must be approved by the IRB prior to being used.

Please contact the Research Compliance Office (email: umkcirb@umkc.edu; phone: (816)235-5927) if you have questions or require further information.

Appendix D

IRB Consent for Participation in a Research Study

Wellness Promotion in Community-dwelling Older Adults Project

Principal Investigator: Dr. Lyla Lindholm

Co-Investigator: H. Machele Skinner

Request to Participate:

You are being asked to take part in a research study. This study is being conducted at the Andrew County Senior Center in Savannah Missouri.

The researcher in charge of this study is Dr. Lyla Lindholm. While the study will be run by her, H. Machele Skinner is a Doctor of Nursing Practice student at the University of Missouri Kansas City and may act for her.

The study team is asking you to take part in this research study because you are participating in the *Strategies for Aging Well* program and are 60 years or older. Research studies only include people who choose to take part. This document is called a consent form. Please read this consent form carefully and take your time making your decision. The researcher or study staff will go over this consent form with you. Ask her to explain anything that you do not understand. Think about it and talk it over with your family and friends before you decide if you want to take part in this research study. This consent form explains what to expect: the risks, discomforts, and benefits, if any, if you consent to be in the study.

Background:

Community-dwelling older adults are at risk for developing chronic diseases that affect their quality of life. Studies have shown that older adults may benefit from participating in health promotion programs. Health promotion programs may help older adults to adopt healthy lifestyle behaviors, better manage chronic diseases, and increase their quality of life.

You are being asked to participate in this study because you are a community-dwelling adult who is 60 years or older and involved in the health promotion program *Strategies for Aging Well* at the Andrew County Senior Center. You will be one of about 25 subjects in the study at Andrew County Senior Center.

Purpose:

The research question is, in community-dwelling older adults living in a county in the central Midwest, does participation in a health promotion program enhance the adoption of health promoting lifestyle behaviors during a 3-month time period at a senior center?

The purpose for the research study is to learn if the health promotion program *Strategies for Aging Well* may affect your adoption of healthy lifestyle behaviors, and to evaluate if the findings support literature that shows benefits for older adults who attend health promotion programs.

Procedures:

Your participation in the research study is voluntary, and you may stop participating at any time by telling Machele Skinner. You may choose to not participate in activities in the education sessions or answer certain questions on the surveys. You do not have to attend all five education sessions to be a part of the study. When you are done with the study, you may keep any educational materials from the education sessions.

If you agree to take part in this study, you will be involved in this study for 3 months, starting September 14, 2016. You will attend up to five 30-minute education sessions at the Andrew County Senior Center.

Education Sessions: You will be asked to complete the Health Promoting Lifestyle Profile II survey at Session 1 and at Session 5. All education sessions will be presented using PowerPoint and small group activities.

Session 1: September 14, 2016 (1200-1230)

- Voluntary consent to participate in the study
- Health-Promoting Lifestyle Profile II: Pen and paper survey will be completed (10 minutes to fill-out)
- Falls Prevention: How to Stay Steady and Upright, education session (20 minutes)

Session 2: September 28, 2016 (1200-1230)

- Staying Heart Healthy: How to Decrease your Heart Attack and Stroke Risk, education session (30 minutes)

Session 3: October 12, 2016 (1200-1230)

- Taking Medication Safely: Understanding Your Medications, education session: (30 minutes)

Session 4: October 26, 2016 (1200-1230)

- Embracing Preventative Care: How to Decrease Your Hospital Visits, education session (30 minutes)

Session 5: November 16, 2016 (1200-1230)

- Being Empowered for Your Health: How to be an Active Participant with Your Health, education session (20 minutes)
- Health-Promoting Lifestyle Profile II: Pen and paper survey will be completed (10 minutes to fill-out)

Risks and Inconveniences:

This research is considered to be minimal risk. This means that the risks of taking part in this research study are not expected to be more than the risks in your daily life. You are at risk for

violation of confidentiality, but this will be minimized by using codes on surveys and not your name or other personal information.

Benefits:

You may possibly benefit from participating in this research study by gaining knowledge about your health.

Fees and Expenses:

There is no cost to you to participate in the program or research study.

Compensation:

Your name will be placed in a drawing for a \$50 gift card to a local grocery store each time you attend a program session. The more you come, then the more chances you have to win a gift card. Giveaways of Missouri Western State University (MWSU) logo pens or banners will be given at each session.

Alternatives to Study Participation:

The alternative to study participation is not to take part in the study. You may attend the education session even though not participating in the study. If you choose not to participate in the study, then your survey answers will not be included in the study findings and will not be viewed by the researchers. You do not have to participate in the research study to be eligible for the gift card drawing or to receive MWSU giveaway items

Confidentiality:

While we will do our best to keep the information you share with us confidential, it cannot be absolutely guaranteed. Individuals from the University of Missouri-Kansas City Institutional Review Board (a committee that reviews and approves research studies), Research Protections Program, and Federal regulatory agencies may look at records related to this study to make sure we are doing proper, safe research and protecting human subjects. The results of this research may be published or presented to others. You will not be named in any reports of the results.

To maintain your privacy and confidentiality, participants will be assigned a code to use for the surveys. The code sheet will be kept separate from other data in a separate locked file cabinet in a locked room at the senior center with access only by the student investigator. After entry of the demographic and survey data into a password protected university computer system, the code sheet will be destroyed by placing into a secured shredder disposal system.

At the end of the study, the investigator will place the survey answers into a secured computer program, and the paper code list and paper surveys will be destroyed. All data will be stored on UMKC RedCap at the end of the study for a period of 7 years. All other digital files and participant papers will be destroyed except for consents. Consents will be retained in paper form by Lyla Lindholm in her faculty office at UMKC, a locked room and locked cabinet, for 7 years and then placed in a secured shredding university disposal system.

Contacts for Questions about the Study:

You should contact the Office of University of Missouri-Kansas City's Institutional Review Board at 816-235-5927 if you have any questions, concerns, or complaints about your rights as a research subject. You may call the researcher, Machele Skinner at 816-390-5701 if you have any questions about this study. You may also call her or Lyla Lindholm at 816-235-5340 if any problems come up.

Voluntary Participation:

Taking part in this research study is voluntary. If you choose to be in the study, you are free to stop participating at any time and for any reason. If you choose not to be in the study or decide to stop participating, your decision will not affect any care or benefits you are entitled to. The researchers or doctors may stop the study or take you out of the study at any time if they decide that it is in your best interest to do so. They may do this for medical or administrative reasons or if you no longer meet the study criteria. You will be told of any important findings developed during the course of this research.

You have read this Consent Form or it has been read to you. You have been told why this research is being done and what will happen if you take part in the study, including the risks and benefits. You have had the chance to ask questions, and you may ask questions at any time in the future by calling Machele Skinner at 816-390-5701. By signing this consent form, you volunteer and consent to take part in this research study. Study staff will give you a copy of this consent form.

Signature (Volunteer Subject)

Date _____

Printed Name (Volunteer Subject)

Signature of Person Obtaining Consent

Date

Printed Name of Person Obtaining Consent

Appendix E
Cost Table for Project

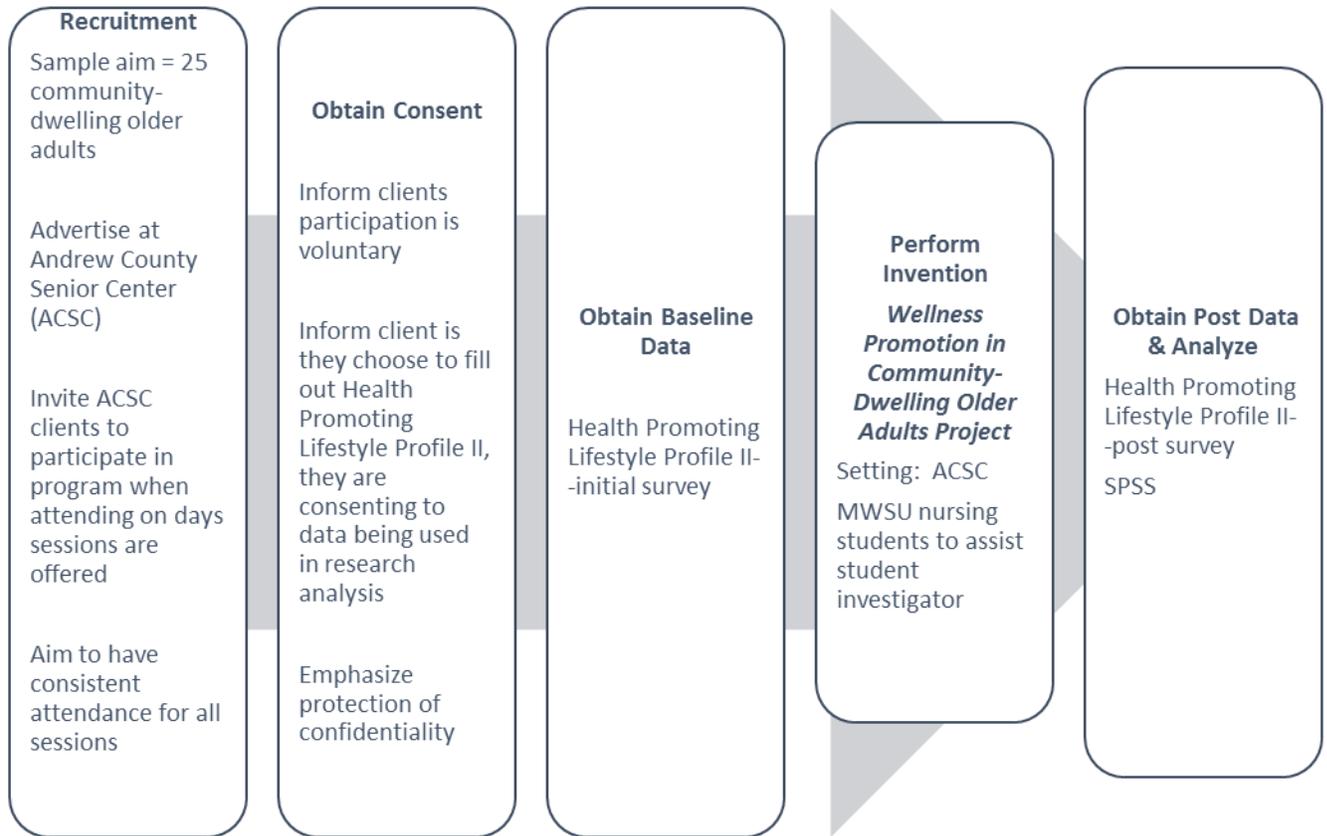
Cost Analysis

Direct costs	
Program Manager Fee	\$700
Supplies	\$400
Transportation	\$50
Gift Cards for drawing	\$50 x 3 = \$150
Indirect Costs	
Administration & research cost	\$4200
Total Program Costs	\$5500

[700 = \$140 x 5 days of program; \$4200 = \$140 x 30 days to design and analyze outcomes]

Appendix F

Intervention Flow Diagram, Procedure



Appendix G

Project Timeline Flow

Program Plan	Date	Action
Study evidence	January 2016 March 2016 May 2016 Summer 2016	Literature Review Evidence synthesis Project proposal Obtain IRB approval
Plan program	February 2016 Summer 2016	Set dates at community senior center Design program
Implement program	September- November 2016 <i>September 14, 2016</i> <i>September 28, 2016</i> <i>October 12, 2016</i> <i>October 26, 2016</i> <i>November 16, 2016</i> <i>Wednesdays 1200-1230:</i> <i>20-minute group education session</i>	Recruit and energize participants Energize nursing students Provide program
Evaluate program	September -November 2016 Spring 2017	Collect data as proposed SPSS Qualitative search of themes Disseminate findings

Appendix H

Measurement Outcomes and Tools

Outcomes	Measurement Tools	Tool Validity & Reliability
Primary Outcome		
<ul style="list-style-type: none"> • Participant level of health promoting lifestyle behaviors 	<ul style="list-style-type: none"> • Health Promoting Lifestyle Profile II • Completed by participants at the beginning and end of program by those attending all sessions 	<ul style="list-style-type: none"> • <u>Test-retest Reliability</u> – .892 after 3-week interval. • <u>Internal Consistency</u> – Cronbach's alpha total scale = .943. Subscales range from .793-.872 • <u>Construct Validity</u> – Confirmed by factor analysis and convergence with the Personal Lifestyle Questionnaire (r = .678) • <u>Criterion Validity</u> – Significant correlations with concurrent measures of perceived health status and quality of life (r = .269 - .491)

Health-Promoting Lifestyle Profile II

DIRECTIONS: This questionnaire contains statements about your *present* way of life or personal habits. Please respond to each item as accurately as possible, and try not to skip any item. Indicate the frequency with which you engage in each behavior by circling:

	Never	Sometimes	Often	Routinely
1. Discuss my problems and concerns with people close to me.	N	S	O	R
2. Choose a diet low in fat, saturate fat, and cholesterol.	N	S	O	R
3. Report any unusual signs or symptoms to a physician or other health professional.	N	S	O	R
4. Follow a planned exercise program.	N	S	O	R
5. Get enough sleep.	N	S	O	R
6. Feel I am growing and changing in positive ways.	N	S	O	R
7. Praise other people easily for their achievements.	N	S	O	R
8. Limit use of sugars and food containing sugar (sweets).	N	S	O	R
9. Read or watch TV programs about improving health.	N	S	O	R
10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).	N	S	O	R
11. Take some time for relaxation each day.	N	S	O	R
12. Believe that my life has purpose.	N	S	O	R
13. Maintain meaningful and fulfilling relationships with others.	N	S	O	R
14. Eat 6-11 servings of bread, cereal, rice and pasta each day.	N	S	O	R
15. Question health professionals in order to understand their instructions.	N	S	O	R
16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).	N	S	O	R
17. Accept those things in my life which I cannot change.	N	S	O	R
18. Look forward to the future.	N	S	O	R
19. Spend time with close friends.	N	S	O	R
20. Eat 2-4 servings of fruit each day.	N	S	O	R
21. Get a second opinion when I question my health care provider's advice.	N	S	O	R

22. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).	N	S	O	R
23. Concentrate on pleasant thoughts at bedtime.	N	S	O	R
24. Feel content and at peace with myself.	N	S	O	R

	Never	Sometimes	Often	Routinely
25. Find it easy to show concern, love and warmth to others.	N	S	O	R
26. Eat 3-5 servings of vegetables each day.	N	S	O	R
27. Discuss my health concerns with health professionals.	N	S	O	R
28. Do stretching exercises at least 3 times per week.	N	S	O	R
29. Use specific methods to control my stress.	N	S	O	R
30. Work toward long-term goals in my life.	N	S	O	R
31. Touch and am touched by people I care about.	N	S	O	R
32. Eat 2-3 servings of milk, yogurt or cheese each day.	N	S	O	R
33. Inspect my body at least monthly for physical changes/danger signs.	N	S	O	R
34. Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking).	N	S	O	R
35. Balance time between work and play.	N	S	O	R
36. Find each day interesting and challenging.	N	S	O	R
37. Find ways to meet my needs for intimacy.	N	S	O	R
38. Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day.	N	S	O	R
39. Ask for information from health professionals about how to take good care of myself.	N	S	O	R
40. Check my pulse rate when exercising.	N	S	O	R
41. Practice relaxation or mediation for 15-20 minutes daily.	N	S	O	R
42. Am aware of what is important to me in life.	N	S	O	R
43. Get support from a network of caring people.	N	S	O	R
44. Read labels to identify nutrients, fats, sodium content in packaged food.	N	S	O	R

45. Attend educational programs on personal health care.	N	S	O	R
46. Reach my target heart rate when exercising.	N	S	O	R
47. Pace myself to prevent tiredness.	N	S	O	R
48. Feel connected with some force greater than myself.	N	S	O	R
49. Settle conflicts with other through discussion and compromise.	N	S	O	R
50. Eat breakfast.	N	S	O	R
51. Seek guidance or counseling when necessary.	N	S	O	R
52. Expose myself to new experiences and challenges.	N	S	O	R

Appendix I

Permission for Tool Use

Permission to use the Health-Promoting Lifestyle Profile II

2 messages

Skinner, Machele <hskinner@missouriwestern.edu>

Sat, Apr 23, 2016 at 8:42 AM

To: swalker@unmc.edu

Hi Dr. Walker,

My name is Machele Skinner, and I am currently working on my DNP Scholarly Project at the University of Missouri Kansas City. My project focus is on community-dwelling older adult wellness, and I am interested in using your Health-Promoting Lifestyle Profile II as my main assessment tool.

May I have permission to use the Health-Promoting Lifestyle Profile II in my project? If so, please forward any information that you feel would be helpful in using the tool, and any insight you have gained through using it.

Thank you very much,
Machele Skinner, MSN, RN, CEN

Walker, Susan Noble <swalker@unmc.edu>

Sat, Apr 23, 2016 at 11:41 AM

To: "Skinner, Machele" <hskinner@missouriwestern.edu>

Dear Machele,

You may use the HPLPII.

Best wishes with your research,

Susan

Appendix J--Data Collection Template

HPLPII Score	Participant	Age Range	Gender	Pretest Score	Posttest Score
Sub-scale Scores	Participant	Age Range	Gender	Pretest Score	Posttest Score
Health Responsibility					
Physical Activity					
Nutrition					
Spiritual Growth					
Interpersonal Relations					
Stress Management					

Appendix K

Statistical Analysis Results Tables

Wilcoxon Signed Ranks Test n = 5		
HLPLII	Pre-test median score: 3.22 Post-test median score: 3.10	p = .334
Health responsibility subscale	Pre-test median score: 3.18 Post-test median score: 3.24	p = .684
Physical activity subscale	Pre-test median score: 2.92 Post-test median score: 2.76	p = .461
Nutrition subscale	Pre-test median score: 2.96 Post-test median score: 2.82	p = .414
Spiritual growth subscale	Pre-test median score: 3.34 Post-test median score: 3.44	p = .581
Interpersonal relations subscale	Pre-test median score: 3.48 Post-test median score: 3.28	p = .273
Stress management subscale	Pre-test median score: 3.08 Post-test median score: 2.96	p = .715

p value = 0.05

Appendix L

Definition of Terms

Community-dwelling older adult: Adult aged 60 years and older living independently within the community and not living in an institutionalized setting (nursing home, assisted living).

Health promoting lifestyle habits: A multidimensional pattern of self-initiated actions and perceptions that serve to maintain or enhance the level of wellness, self-actualization, and fulfillment of the individual (Walker, Sechrist, & Pender, 1987).

Wellness: Is a state of health marked by physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 2016). It is a dynamic state of being concerned with physical, psychological, and spiritual environments (Travis & Ryan, 2004). It involves giving good care to the physical self, using the mind constructively, expressing emotions effectively, and being creatively involved with the world (Travis & Ryan, 2004).

Appendix M—Logic Model

Inputs	Intervention(s) Outputs		Outcomes -- Impact		
	Activities	Participation	Short	Medium	Long
<p>Evidence, sub-topics</p> <p>Main Topics:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Community-dwelling older adults (CDOA) <input type="checkbox"/> Community-based health promotion programs <p>Sub-topics:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>Common Themes:</u> <input type="checkbox"/> Lifestyle choices <input type="checkbox"/> Chronic disease management <input type="checkbox"/> Safety <input type="checkbox"/> Psychosocial issues <input type="checkbox"/> Program Design <input type="checkbox"/> Recruitment and Attendance <p>The literature supports that community-based health promotion programs designed for older adults produce positive benefits for participants</p> <p>Major Facilitators or Contributors <u>Key stakeholder support:</u> the university</p>	<p>EBP intervention which is supported by the evidence in the Input column</p> <p>Community-based health promotion program designed for community-dwelling older adults</p> <p>Major steps of the intervention</p> <p>5 interactive educational sessions</p> <ol style="list-style-type: none"> 1. Falls 2. Heart health 3. Medication safety 4. Prevention 5. Proactive in health <p>Each session will provide clients with community health resource information</p>	<p>The participants (subjects) Approx. 25 participants 60 years and older</p> <p>Site Senior Center—NW MO</p> <p>Time Frame Fall 2016 September 14, 2016 September 28, 2016 October 12, 2016 October 26, 2016 November 16, 2016</p> <p>Wednesdays 1200-1230:</p> <p>20-minute group education session with 10-minute question and answer.</p> <p>Consent Needed or other</p> <p>Consent to use pre/posttest results from participants</p>	<p>(Completed as student)</p> <p>Outcome(s) to be measured with valid & reliable tool(s) Health-Promoting Lifestyle Profile II is a self-report of health-promoting lifestyle habits. Subscales include Self-Actualization, Health Responsibility, Exercise, Nutrition, Interpersonal Support, and Stress Management (Walker, Sechrist, & Pender, 1987).</p> <p>Statistical analysis to be used SPSS Wilcoxon Matched-Pairs test</p>	<p>(after student DNP)</p> <p>Outcomes to be measured</p> <p>If participants adopted more health-promoting lifestyle habits after the educational intervention</p>	<p>(after student DNP)</p> <p>Outcomes that are potentials</p> <p>If adoption of health-promoting lifestyle habits continued over next year or longer.</p>

<p>Senior Center administration</p> <p>Major Barriers or Challenges Attendance and engagement of audience</p>		<p>Person(s) collecting data Main researcher with assistance of university nursing students</p> <p>Others directly involved Senior Center administration, Linda Lambright and Sandi Beattie to host sessions and introduce us</p>			
--	--	---	--	--	--

Appendix N

Intervention Material, Example of Education Program

The intervention plan for the program: Strategies for Aging Well

Session One: September 14, 2016

Falls Prevention: How to Stay Steady and Upright

Session Two: September 28, 2016

Staying Heart Healthy: How to Decrease your Heart Attack & Stroke Risk

Session Three: October 12, 2016

Taking Medications Safely: Understanding your Medications

Session Four: October 26, 2016

Embracing Preventative Care: How to Decrease your Hospital Visits

Session Five: November 16, 2016

Being Empowered for your Health: How to be an Active Participant with your Health

Appendix O

UMKC SoNHS Proposal Approval Letter



July 18, 2016

UMKC Institutional Review Board
University of Missouri-Kansas City
Kansas City, MO 64108

UMKC IRB,

This letter serves to provide documentation regarding Helen Machele Skinner's Doctor of Nursing Practice (DNP) Project proposal. Ms. Skinner obtained approval for her project proposal, Wellness Promotion in Community-dwelling Older Adults, from the School of Nursing DNP faculty committee on July 18, 2016.

If I can provide any further information, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Susan J. Kimble".

Susan J. Kimble, DNP, RN, ANP-BC, FAANP
Clinical Associate Professor
DNP Programs Director
UMKC School of Nursing and Health Studies
816-235-5962
kimbles@umkc.edu