Initiation of a health promotion program in chronic disease self-management for senior center participants

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Initiation of a Health Promotion Program in Chronic Disease Self-Management for Senior Center Participants

by

Suzanne E. Slovak BSN, RN

A DNP PROJECT

Submitted in partial fulfillment of the requirements for the Degree of Doctor of Nursing Practice to
The School of Graduate Studies of
The University of Alabama in Huntsville

HUNTSVILLE, ALABAMA
2019
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Suzanne E. Slovak 10/23/2019

Student Signature Date
DNP PROJECT APPROVAL FORM

Submitted by Suzanne E. Slovak in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice and accepted on behalf of the Faculty of the School of Graduate Studies by the DNP project committee.

We, the undersigned members of the Graduate Faculty of The University of Alabama in Huntsville, certify that we have advised and/or supervised the candidate on the work described in this DNP project. We further certify that we have reviewed the DNP project manuscript and approve it in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice.

[Signatures]

(Date) 10/23/19

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ABSTRACT
The School of Graduate Studies
The University of Alabama in Huntsville

Degree: Doctor of Nursing Practice College: Nursing

Name of Candidate: Suzanne E. Slovak

Title: Initiation of a Health Promotion Program in Chronic Disease Self-Management for Senior Center Participants

Background:

Chronic conditions within the aging population have continued to rise causing a significant impact in the clinical setting for both patient care and health outcomes with the increased use of health care services and repeat hospitalizations. This project attempts to determine the effectiveness of health promotion education in the increasing of health promotion knowledge, positive behavioral changes and chronic disease self-management implementation for individuals within the senior center atmosphere.

Methods:

The design utilized a quantitative, empirical method. The population focus included older adults at a local senior center, ages 60-85 who actively attended the senior center and had access to both an email account and a physical mailing address. A non-probability, convenience sample was used from the patients participating in the service at a metropolitan, not-for-profit senior center facility. Initially 29 participants were recruited. The intervention included eight (8) emails, two (2) monthly mailed newsletters and quick reference guides that provided health promotion education which can be applied in daily life to improve both the individuals’ quality of life and health outcomes as measured by the Health-Promoting Lifestyle Profile II survey.
Results:

The initial cohort consisted of 29 individuals; 20 female/9 male, whom 4 were later excluded from the final analysis due to not completing the post-intervention final survey. The evaluation of various aspects of healthy living were considered after the project’s intervention of health promotion education pieces. Seven sub-scales were assessed: Health-Promoting Lifestyle, Health Responsibility, Physical Activity, Nutrition, Spiritual Growth, Interpersonal Relations and Stress Management. The survey consisted of 52 variables in which 37 pairs were found to have significant differences ($P = 0.05$) while 15 were not significant ($P > 0.05$) with the paired t-test. The post intervention data revealed that the participant health education levels were improved following the implementation of the health promotion educational pieces as compared to pretest data.

Conclusions:

Educational pieces that cover health promoting topics including nutrition, exercise, disease pathology, and motivation distributed through electronic and physical methods showed marked improvements in individuals health education issues. It further showed significant differences post intervention in the health-promoting lifestyle, health responsibility, nutrition and spiritual growth sub-scales. The provision of educational pieces and the statistically significant outcomes has shown to be a valuable technique for the provision of health promotion education within this population.

Keywords:

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Initiation of a Health Promotion Program in Chronic Disease Self-Management for Senior Center Participants

By 2030 it is projected that one in five people living in the United States will be over the age of 65 (Simpson, Edwards, & Berlin, 2018). The increasing life expectancy creates the potential for lifestyle behaviors that can increase the complexity of caring for this population including; inadequate dietary habits, sedentary lifestyle, and further complications due to coexisting chronic diseases (Simpson, Edwards, & Berlin, 2018). Providers can encourage patient independence and health promotion through the use of education with information on potential health risks, health promotion methods, the creation of an individualized self-management plan, and patient safety measures.

As the average life expectancy increases in the United States, the provision of health promotion education can play a vital role in the successful aging of individuals over the age of 65 (Olvari et al., 2018). Since the passing of the Older Americans Act (OAA) in 1965 and its focus on the provision of comprehensive services for the aging, senior centers have become one of the most used services among this population nearing 11,000 centers and serving over 1 million older adults daily (AOA, 2015). Historically, individuals that participate in senior center programs have shown improvements in several areas including their physical, social, mental, economic and spiritual well-being (AOA, 2015). Senior centers are poised to play an integral role in the aging baby boomer generation and its two-thirds representation of individuals over the age of 50, with its diverse programs allowing for the successful management of chronic diseases through education and health promotion.

The path to successful aging involves more than correct genes, but rather, the individual must be actively engaged in the management of chronic disease(s) achieved through behavioral
and lifestyle changes (Cramm et al., 2012). The Centers for Medicare and Medicaid Services (CMS) (2012) stated the most common chronic conditions experienced among Medicare beneficiaries included; high blood pressure (61%), high cholesterol (48%), heart disease (34%), arthritis (31%) and diabetes (28%). The Centers for Disease Control and Prevention goes on to state that six in ten adults in the United States have a chronic disease, with four in ten having two or more conditions (CDC, 2019). Chronic conditions are the leading causes of death and disability and the primary contributor to the $3.3 trillion annual cost for health care (CDC, 2019). The key lifestyle risks for the development of chronic diseases are; tobacco use, poor nutrition, lack of physical activity and excessive use of alcohol (CDC, 2019). An increasing amount of studies have proposed that the prevention of the age-related decline could be more effective than preventing the consequences experienced from a disease pathology (Cramm et al., 2012, Rockwood et al., 1994). The implementation of varying self-management interventions is most effective when executed during the initial experiencing of symptoms rather than after time has elapsed (Cramm et al., 2012). The application of a health promotion self-management plan will allow the individual to have an active role in the design and execution of the plan including the use of problem-solving skills, self-efficacy, and the managing of the necessary lifestyle and behavioral changes that will promote successful adherence and outcomes.

The sustained efforts for early prevention and health promotion program(s) are imperative as the population living in the United States rapidly increase to allow for improved quality of living and patient outcomes (Ng, Jenson, & Fritz, 2017). The provision of health promotion education serves to both educate and help manage recipients for earlier disease detection and management. The promotion of long-term behavioral changes and the adoption of
self-management plans for chronic diseases allow for improved outcomes with the possibility of decreasing overall health care costs.

Further investigation needs to be conducted with attention to the geriatric population and the deliverance of health promotion education directed towards diseases most prevalent within this population for effective chronic disease self-management. The management of chronic disease(s) in this population is of critical importance within the senior center setting due to the increased lifespan of the individuals and the ongoing use of programs and opportunities offered within this environment.

**PICOT:** In senior center participants, will receiving health promotion education for a duration of six-weeks increase health promotion knowledge and the likelihood of successful chronic disease self-management implementation?

This project evaluates the effectiveness of health promotion education in increasing health promotion knowledge and chronic disease self-management implementation in senior center participants. The *Mindful Health* educational materials were created by the Project Leader and included sections covering the subjects of disease pathology, nutrition, exercise and motivation. The objective(s) of the project were to assess (a) comparison of senior center participants health promotion knowledge and behaviors prior to and after health promotion education, *Mindful Health* as measured by the Health-Promoting Lifestyle Profile II questionnaire; (b) improvement in chronic disease self-management knowledge from the provided health promotion education, *Mindful Health*, as measured by Health-Promoting Lifestyle Profile II questionnaire; and (c) overall patient perceived improvement in quality of life and application of knowledge gained from the health promotion education, *Mindful Health* as measured by Health-Promoting Lifestyle Profile II questionnaire.
Synthesis of Evidence

A review of the literature identifies studies that relate to key aspects of the effectiveness of health promotion education for increased chronic disease self-management of older adults in the senior center environment. Studies from all countries published in English were included in the review. A search was conducted on PubMed (3,406), CINAHL (1,514), Google Scholar (393,000) and Cochrane (10) databases to identify research publications related to this topic. Additionally, references used within related articles were considered to identify additional articles for review. All full-text manuscripts from 2000 to 2019 were considered during the search. Inclusion criteria for this review included; written in English, peer-reviewed full-text manuscripts which supported the focus topic of this project. Studies were excluded if the population did not involve individuals over the age of 50 years. Key search terms were used alone and in combination with each other including ‘senior center’, ‘self-management’, ‘chronic disease management’, ‘geriatric chronic disease self-management’, ‘barriers/facilitators of chronic disease self-management’, and ‘self-motivation’.

Senior Center Services

The first modern senior center was developed in 1943 with its focus centered on the provision of recreational and educational opportunities for the elderly in the surrounding communities (NCOA, 2011). Since the passing of the Older Americans Act the senior center movement has greatly increased providing a diverse selection of services to all levels of socioeconomic and educational backgrounds of the elderly population (NCOA, 2011). Senior centers serve as a pathway to services that can help older adults stay healthy and function independently longer with its use (NCOA, 2019). Women account for over 70% in attendance of the center’s activities, with half living alone (NCOA, 2019, AOA, 2019). Over 75% of
individuals using a senior center attend one to three times a week and spend an average of 3.3 hours per visit, with the average age being 75 years old (NCOA, 2019, AOA, 2019). Frequent users of senior centers often include individuals with both a low social-economic standing and education level but are more socially involved and typically live in the surrounding community while relatively still in good functional and cognitive health (Turner, 2006, Skarupski & Pelkowski, 2003). Programs offered at the centers can include health screening, education, trips, crafts, exercise classes, socialization opportunities and the provision of meals (Turner, 2006). Senior centers have created a path for the older generation with the adoption of new methods and approaches that help promote independence and facilitates an increase in healthy living within this population.

**Health Literacy**

Older adults over the age of 65 are an especially vulnerable group when planning a chronic disease self-management plan due to the potential for decreased knowledge and health literacy (Ownby, Waldrop-Valverde & Taha, 2012, Ashida et al., 2011, Jovic-Vranes & Bjegovic-Mikanovic, 2012, Von Wagner, Knight, Steptoe & Wardle, 2007, Kutner, Greenburg, Jin & Paulsen, 2006, Geboers et al., 2016). Health literacy has been considered the ability for people to access and understand information regarding health concerns in order to promote and maintain a satisfactory quality of life across their life span (Kwan et al., 2006). Individuals that display low levels of health literacy have been shown to exhibit an increased likelihood of adverse health outcomes including; recurrent hospitalizations, increased mortality rates and a decreased quality of life (Geboers et al., 2016, Cho, Lee, Arozullah & Crittenden, 2008, Berkman, Sheridan, Donahue, Halpern & Crotty, 2011, Tokuda, Doba, Butler & Paasche-Orlow, 2009). Health literacy also involves cognitive and social skills that are needed to have the
motivation and ability of the individual to gain access to and use the gained information to promote and maintain good health (Wang, Lang, Xuan, Li & Zhang, 2017). Increasing levels of health education encourages patient empowerment, autonomy and adherence to a health promotion lifestyle allowing for improved health outcomes.

An individual who engages in a health promotion lifestyle is more likely to detect and treat an arising health condition in an expedient manner than those without a self-management plan in place (Stearns et al., 2000). The implementation and adherence to a chronic disease self-management plan may also be associated with a subsequent reduction in the use and cost of health care services as seen by the reduction in office visits (Stearns et al., 2000, Grembowski et al., 1993). A self-management plan can be used when assessing lifestyle and behavioral habits and performing daily self-care practices such as the monitoring of blood pressure, heart rate, exercise, and dietary choices. The self-management plan for chronic disease(s) allows the individual to take an active role and interest in their health and the promotion of healthy habits that can be incorporated into daily proceedings causing a decrease in medical expenses and an increased awareness in acute changes in health.

**Self-Management Impacts**

Self-management abilities become particularly important when the individual faces the loss of a function necessary in maintaining their baseline quality of life. Interventions geared toward a health or disease-related self-management plan have been developed to allow for the effective use in daily functions such as; taking medication, exercising, dietary choices, and the cessation of smoking (Cramm et al., 2013, Clark et al., 1992, Lorig, Ritter & Plant, 1999). In addition to the health-related self-management abilities, there may also be a need for interventions that are focused on the individual’s overall health and well-being in order to
contribute to preventive maintenance and quality of life (Cramm et al., 2012, Cramm & Nieboer, 2017). Individuals with higher levels of social, cognitive, and physical functioning show an increase in positive health promotion outcomes due to having a positive frame of mind, a willingness to take the initiative in the self-management plan creation with dedicated adherence and investing in resources that help with long-term health benefits (Cramm & Nieboer, 2017, Steverink, Lindenberg & Slaets, 2005). Many older individuals experience losses in the social, cognitive, and physical realms of functioning. This has the potential to affect the ability to efficiently use a self-management plan that has a focus on chronic disease(s) if implemented late in the disease pathology. The addition of health promotion education increases the individual’s health outcome with the provision of a holistically focused education and creation of a self-management plan best suited to achieve an optimum quality of life.

As the elderly adult population continues to grow, Americans over the age of 65 will be living with one or more chronic illnesses or disabilities (Ruggiano, Shtompei, Whiteman & Sias, 2017). Currently the national level of chronic diseases represents 85% of all health care expenditures requiring the services of ongoing care and the involved management of the disease (Vogeli et al., 2007, Anderson, 2010). The implementation of a chronic disease self-management plans allows the individual to cope with symptoms, to apply strategies for prevention and allows for communication between healthcare providers and families (Skarupski & Pelkowski, 2014, Meranius & Hammar, 2016). The Institute of Medicine has recognized the use of self-management plans as a priority for the improvement of the quality of healthcare in the United States due to the positive health outcomes that are demonstrated with the timely implementation of these plans into the daily lives of affected individuals (Chodosh et al., 2005, Lorig, Ritter & Plant, 2005, Ory et al., 2013, Marek et al., 2013, Robles & Anderson, 2011). A trusting provider-
patient relationship with the provision of health promotion education helps to encourage the individual in the management of their care.

**Health-Promotion Lifestyle: Nutrition**

Health promotion education provided to the individual has the potential to encourage behavioral and lifestyle changes that increase health outcomes. Nutrition is an important topic and is closely linked to the successful aging and the health status of the individual. The dietary habits of the older adult are often overlooked, even though malnutrition, obesity and decreased levels of health promoting lifestyle knowledge occur within this population (Chen, Huang, & Shao, 2017). A central concept in chronic disease self-management is the promotion of self-efficacy, or the increased ability to manage their chronic disease(s). Participants in self-management programs are taught to practice skills such as problem-solving and encouraged to set goals to help enhance their self-efficacy (Newman, Steed, & Mulligan, 2004). Individuals that participate at area senior centers while receiving additional health promotion education potentially creates lasting changes in daily lifestyles while promoting successful health outcomes and quality of life.

Chronic health problems affect older adults causing limitations of activities of daily living (ADLs) leading to further declines in functionality and disabilities (Kwok, Au & Li-Tsang, 2016, Laforest, Nour, Parisien, Poirier, Gignac & Lankoande, 2007). Complications seen in patients with osteoarthritic knee disease experience disturbed sleep patterns, appetite impairment, walking difficulties, decreased social activities and activities of daily living with increased incidences of depression (Kwok, Au & Li-Tsang, 2016). Chronic disease self-management is a lifetime task, ideally with the patient as the person responsible for the daily management of its goals, expectations, and outcomes (Bandura, 1977). The knowledge gained by
the patient through education and interventions help reduce patient symptoms and improves patient outcomes more than the use of medications alone (Laforest et al., 2007, Espinoza, Espinoza, Wilson & Denton, 2018)

**Health Promotion Lifestyle: Physical Activity**

Increased body mass indexes (>25) in older adults pose health hazards that can trigger cardiovascular disease, adult-onset diabetes, joint complications, Alzheimer’s Disease and cancer (Bussel, 2018, Harvard Health Publishing, 2017, Razay, Vreugdenhil & Wilcock, 2006, Kritchevsky et al., 2017). Disease pathologies such as osteoarthritis and heart disease have the potential to decrease patient mobility which cause further complications in disease progression, dietary decisions and exercise frequencies. The most significant predictor of weight gain in older adults involves the loss of muscle mass due to lower levels of physical activity (Keller, 2018). Weight that is gained around the abdomen (visceral fat) can occur due to hormonal changes and stress further decreasing muscle mass and physical activity. This has led to the general consideration that waist size should not be greater than half of a person’s total height (Bussel, 2018, Gill et al., 2015, Brydon et al., 2008). Older adults start to experience muscle mass loss at the age of 50 accounting for a 20% reduction which causes the metabolism to slow down and makes weight loss harder to attain. This increases the importance of a dietary protein intake of greater than 30g daily for appetite satiation, counteracting the muscle loss, and allows for muscle growth and repair to occur (Harvard Health Publishing, 2016, Nowson & O’Connell, 2015, Volek, 2018, Chambers et al., 2015).

Physical exercise has shown to decrease blood pressure, heart rate, total peripheral vascular resistance while also increasing cardiac output (CO) and end-systolic volumes (Arca, Martinelli, Martin, Waisberg & Franco, 2013). Limitations in overall movements are seen in
80% of the aging population making alternative methods for physical fitness necessary. These include low-impact exercises including aquatic aerobics or swimming to reduce joint overload to promote increased muscle strength and flexibility while providing an increase in patient independence and improved quality of life (Sharma, Kapoor & Issa, 2006, Bocalini, Serra, Rica & dos Santos, 2010). Health promotion education that stresses the importance of actively participating in aerobic exercise for 150 minutes each week is imperative in the aging adult population for the sustaining of muscle mass, in decreasing blood pressure, heart rate, peripheral resistance with increases in cardiac output and mobility adding to the patient’s quality of life.

**Conceptual Framework**

The Interpersonal Relations Theory (IRT) by Hildegard Peplau (1909-1999) is considered a mid-range, descriptive classification theory (Fawcett, 2005; McCamant, 2006). This theoretical framework establishes the importance of the nurse-patient relationship to further the personal development of the patient through the use of therapeutic communication (Smith & Parker, 2015). IRT posits the central role of the nurses’ work transpires during the interactions with the patient (Peplau, 1997). Initially developed as a theory dedicated to psychiatric nursing, it is easily adaptable to all areas of nursing care (Peden, 2006).

In a conversation with the provider, the patient is placed in a “dependent relationship” allowing for the communication to lead to therapeutic effects and overall client well-being (Gastmans, 1998; McCarthy & Aquino-Russell, 2009). This relationship also provides for a caring presence allowing the provider to actively seek out and learn who their patient is as a person (McCarthy & Aquino-Russell, 2009). The relationship between the provider and patient exists exclusively in the professional realm and does not have aspects of a personal acquaintance so as to maintain adherence to the defined parameters of the association. The provider enables
the patient to find the resolution or the ability to cope with their illness by providing knowledge relevant to the patient’s health status (Deane & Fain, 2015).

The Interpersonal Theory defines a process of evolution for the provider-patient relationship which develops through specific phases. These begin with a starting and completion points that include orientation, working (identification and exploitation), and resolution (Yamashita, 1997). Within each phase, the relationship is actively progressing with the majority of the time being spent in the working phase.

**Figure 1: Hildegard Peplau’s Theory of Interpersonal Relations**

The *orientation phase* is the briefest and consists of the establishment of the provider-patient relationship. During this time the provider is getting to know the patient on both a personal and health-related level due to the newness and unfamiliarity of the relationship. During this phase, expectations of the care to be provided is addressed along with the establishment of goals and outcomes (Smith & Parker, 2015). For this project, this phase will occur on the day(s) of recruitment when the project intent and its purpose are discussed with the participants. During this time, the participants and Primary Investigator form a groundwork or relationship foundation in which the remaining phases will be based off of. This phase allows the participants and Primary Investigator to discuss the educational material, *Mindful Health* that will be a part of the
project and how it can be a positive influence for the individual in their daily lives. Interventions are applied while in this phase along with an evaluation of patient goals (Peplau, 1992).

The working phase is the longest and consists of the most significant effort taking place. This is due to the individual better understanding their illness and taking an active role in the maintenance of their healthcare. The individual will use the Mindful Health resources presented by the Primary Investigator to further improve their health education and in the development of independence to successfully address challenges faced in the future (Dean & Fain, 2016; Senn, 2013). During this phase, the recipient begins to accept the Primary Investigator and the health promotion education that is provided through the Mindful Health intervention helping to further encourage the development of trust within the relationship.

The final phase is the resolution phase. During the resolution phase, the Primary Investigator will lead the participants to closure and the ability to identify support systems outside of the relationship (Price, 1998). The participant experiences a continual movement of independence due to the distancing of the provider and in turn, an increased ability to manage their care effectively (Smith & Parker, 2015). During the project, the Mindful Health education pieces will total eight electronically sent education items along with four mailed pieces. At the conclusion of the project the individuals received the final electronic Mindful Health education piece along with a post-intervention survey to provide a conclusion to the relationship. Success is determined by how well the Primary Investigator and the participants progressed through the initial phases (orientation and working). During the concluding phase, the provider will need to further teach the individuals about symptom management and continuing the recovery process at home and the achievement of mutual termination of the relationship (Hagerty, Samuels, Norcini-Pala, & Gigliotti, 2017).
Through the insight of Peplau’s Interpersonal Theory, we understand that providers can deliver effective patient care through the foundational establishment of provider-patient trust. The successful progression through each phase helps the individual to grow in both the understanding and independence necessary to properly manage their long-term health condition. Peplau in her findings felt the emphasis of nursing should be directed on the engagement of the individual in therapeutic relationships that would, in turn, move them towards improved health (Smith & Parker, 2015). The provider can deliver effective patient-centered care which has a direct impact on patient outcomes making IRT a useful framework for understanding the best in-field practices.

**Need for Further Study**

In an aging society, patient understanding of chronic disease self-management is critical. The increasing lifespan of patients have created a need for improvements to be made in the management of chronic illnesses and medical advancements. Within the aged population, lower rates of adherence to prescribed medications and self-management plans have been experienced from the lack of education and the potential for decreased health literacy (Laforest et al., 2007, Espinoza, Espinoza, Wilson & Denton, 2018). Health promotion education like *Mindful Health* allows for the building of a trusting provider-patient relationship while providing the foundation for chronic disease interventions and improved patient outcomes while increasing adherence to self-management plans.

**Methods**

The purpose of this project is to evaluate the effectiveness of health promotion education through the use of the material *Mindful Health* in increasing chronic disease self-management plan implementations in senior center participants. The design utilized a quantitative,
phenomenological method. The population consists of individuals who met the criteria for participation in senior center activities. A non-probability, convenience sample was used drawing from the individuals participating in the senior center services located in a large metropolitan area. After receiving Institutional Review Board (IRB) approval (Appendix C), project facility agreement and written informed consent from participants, data was collected using a validated 52-question survey with a separate demographic section.

The study sample was a nonprobability, convenience sample of 25 patients who participated in the programs sponsored by the senior center. Inclusion criteria for patient subject selection included: (a) patients who attended the senior center; (b) participated in the programs sponsored by the senior center; (c) read and speak English; (d) willingness to complete the electronic survey(s); (e) had access to the internet; and (f) had a valid email address. The initial sample size consisted of 29 participants, (n = 9) male and (n = 20) female, of which 4 participants were withdrawn due to not completing the final survey leaving (n = 9) male and (n = 16) females in total.

The Project Leader (PL) recruited subjects for the project with flyers (Appendix A) advertising the project recruitment dates and face-to-face encounters from the senior center in which the sponsored programs were conducted. The senior center was located in a large, metropolitan area as a not-for-profit-organization that provide services to the focused population. The appendix (B) includes the letter of consent that each of the participants signed prior to participating in the project.

Prior to recruitment of project participants, the PL visited the site where the senior center programs are conducted. During the visit the PL shadowed the Health Programs Coordinator who conducted screening services for the senior center attendees in order to better understand the
process involved with the service provided for the senior center participants. The PL visited the center four times with three visits designated to the identification and recruitment of potential subjects for the project. Upon approval, each subject signed a written consent form agreeing to participate in the project and completed a paper version of the survey at that time.

The PL obtained permission to conduct the project from the University of Alabama in Huntsville Institutional Review Board (Appendix C). Permission was also sought and granted from the Huntsville-Madison County Senior Center (Appendix D). The PL explained to prospective participants the purpose of the project, the participant’s involvement in the project, risks and benefits, and measures taken to protect the confidentiality of the participants’ responses. The PL obtained the participant’s written informed consent according to the criteria stated within the Institutional Review Board of the University of Alabama in Huntsville and in accordance of the Huntsville-Madison County Senior Center at which the project was conducted. All patients were given a copy of the signed consent form while the PL retained the original signed copy of each consent form in a secured location for further participant confidentiality. Upon approval, each subject completed the initial paper form of the survey at that time. The subjects were told that data would be analyzed and reported as a collective total in order to protect the confidentiality of those involved in the project.

The confidentiality of subjects was further protected through the use of a master list of participants with assigned identification numbers retained by the PL. No one other than the PL had access to the master list of subjects involved in the project. The master list remained in a secured location in order to protect the participants confidentiality for the duration of the project. In so doing, the name of the participant could not be positively connected with the survey(s) or the analysis process.
After securing the participant’s written consent, the PL secured a physical address in order to mail each participant a monthly newsletter (2) (Appendix G) with two (2) tri-fold quick reference learning tools (Appendix F) that contained education on health promotion in chronic diseases affecting this population of interest age group, motivation and chronic disease teaching. Additionally, each participant received weekly emails (8 total) from the PL which provided further teaching in health promotion, nutrition and motivational information to encourage learning during the six (6) week project implementation (Appendix E).

The participants completed a paper copy of the Health-Promoting Lifestyle Profile II survey on the day of recruitment. The survey contained an additional ten (10) question section concerning the participant’s demographic information. The participants then completed an electronic form of the survey, with the addition of three (3) questions pertaining to the project intervention for the posttest survey at the completion of the six-week project.

Total time for completion of the pretest and posttest for the project intervention was approximately 40 minutes. Data collection involved the review of the electronic survey tool(s) to better understand if the health promotion education; Mindful Health was effective in chronic care self-management implementation and the subject’s quality of life.

**Implementation Materials**

Individuals that participated in the project received educational materials containing sections on motivation, fitness and nutrition created by the Project Leader. Each educational piece was titled Mindful Health. Participants were informed on the day of recruitment as to the forms that the pieces would use including both electronic and paper forms for the entirety of the project; six weeks. Each participant was given a schedule for each Mindful Health educational
piece and its expected arrival via electronic or paper methods in order to benefit from the *Mindful Health* education.

Participants received eight (8) total electronically sent *Mindful Health* educational emails and two (2) monthly *Mindful Health* educational quick reference tri-fold guides with newsletters that contain expanded sections on disease pathology, motivation, nutrition and fitness that was mailed to the participants for six weeks. Electronically sent *Mindful Health* education pieces contained sections on motivation, nutrition and fitness that are applicable to this population and income level (Appendix E). Time required to read each electronic education piece; *Mindful Health* was approximately 15 minutes of the participants time.

A monthly mailed newsletter (2 total) was sent out and a more in-depth form of the emails covering disease pathology, motivation, exercise and nutrition with recipes (Appendix G). The newsletters were 4 pages. The quick reference tri-fold guide (2) that was sent with the monthly newsletter is a quick reference tool for the participant to refer to for a condensed narrative of either a disease pathology or nutritional supplement (Appendix F).

**Evaluation**

The baseline characteristics of the sample are described with measures of central tendency (frequencies, means, and standard deviations). Data was collected at the initial recruitment of the participants and at 6-weeks post-enrollment was analyzed using inferential statistical testing (paired samples *t* tests) to examine changes in dependent variables over the six (6)-week time frame.

The demographic characteristics of the population was analyzed to verify if a significant relationship amongst the participants of the project existed. The ten (10) question demographic
characteristics used a descriptive statistics method to further differentiate each category so comparisons could be considered.

The instrumentation for the project used the Health-Promoting Lifestyle Profile II (Appendix I) survey that was created by Walker, Sechrist, and Pender (1995). Originally created in 1987 the survey had undergone revisions for the creation of the second version used in this project. Permission was obtained from the author to use the copyrighted tool in its entirety (Appendix L). The 52-item survey uses a 4-point response format to measure the frequency of reported health-promoting behaviors in six (6) subscale sections. The subsections of the scale include; Health Responsibility (9), Physical Activity (8), Nutrition (9), Spiritual Growth (9), Interpersonal Relations (9), and Stress Management (8). Content, criterion-related and construct validity was verified through analysis and through literature reviews that have used the Health-Promoting Lifestyle Profile II tool.

Each of the subgroups used the paired t-test to compare the initial survey health promotion knowledge on the day of recruitment and the post-intervention survey after the Mindful Health education was provided. Additionally, responses were evaluated from the post-intervention survey to determine if health promotion knowledge gained from the Mindful Health intervention improved the effectiveness of chronic disease self-management. Further, the participants’ overall quality of life (QOL) and daily application of the knowledge received from the Mindful Health education was analyzed from the additional post-intervention survey questions (Appendix K) to determine the effectiveness of the intervention.

Minitab version 19 was used to analyze the data from pretest, posttest, and demographical questions. Minitab is a statistical package that was initially developed at the Pennsylvania State University in 1972. The statistical analysis software allowed for the
calculation and creation of graphs that provided a clearer interpretation of the project outcomes from the *Mindful Health* intervention.

The project conducted was a clinically focused intervention seeking to evaluate the improvement of various aspects of an individual’s healthy living knowledge and behaviors. Various healthcare markers were used as a measure for evaluation of each participant with the aim for the improvement of each through the duration of the *Mindful Health* intervention. The Health-Promoting Lifestyle Profile II survey was used for both the pretest on the day of recruitment and following the intervention that was offered electronically within a dedicated time frame.

Initial recruitment for the projected secured 29 participants, 9 males, 20 females. Four participants were withdrawn from the study due to not completing the final survey. Marital status from the demographic survey revealed 12 widowed, 11 married, 5 divorced, and 1 other/single.

![Pareto Chart of Gender](image)

**Figure 2: Pretest Gender Chart**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Mean Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>20</td>
<td>70.75</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>2</td>
<td>61.5</td>
</tr>
<tr>
<td>High School Diploma or equivalent</td>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>(blank)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Table 1: Non-Response Profile**
Figure 3: Marital Status

The mean age for the female participants was 73.0, whereas, the mean age for males was 72.22. The mean weight for the female participants was 184.75 pounds, while the male mean was 201.67 pounds.

Figure 4: Female Age
Figure 5: Male Age

Figure 6: Female Weight

Figure 7: Male Weight
Of the 29 participants, 13 were white or Caucasian, 13 black or African American, 2 Asian, 1 American Indian. Highest level of education attained within the participant group included 4 with a High School diploma or equivalent, 9 with some college, 1 associate degree, 9 bachelor’s degree, 2 with master’s degrees.

Figure 8: Education by Gender

<table>
<thead>
<tr>
<th>Race</th>
<th>Count</th>
<th>Percent</th>
<th>Com %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black or African American</td>
<td>13</td>
<td>44.8</td>
<td>44.3</td>
</tr>
<tr>
<td>White or Caucasian</td>
<td>13</td>
<td>44.8</td>
<td>89.7</td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
<td>6.9</td>
<td>96.6</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>3.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Figure 9: Participant Ethnicity
The self-reported medical conditions by the initial group reported 29.2% had hypertension, 25.8% with high cholesterol, 19.1% arthritis, 15.7% Diabetes Mellitus, 4.5% Coronary Artery Disease, 3.4% Congestive Heart Failure, and 2.2% other (cancer or none). Participants with a high school diploma or equivalent (n = 6) had a total of 28 medical conditions. Those with some college (n = 9) totaled 30 conditions. Associate degree holding participants (n = 3) had 8 reported conditions. Bachelor’s degree level (n = 9) reported 19, with Master level participants (n = 2) reporting 4 conditions.

Figure 10: Self-reported Medical Conditions

<table>
<thead>
<tr>
<th>Row Labels</th>
<th>Arthritis</th>
<th>Congestive Heart Failure (CHF)</th>
<th>Coronary Artery Disease (CAD)</th>
<th>Diabetes Mellitus (DM)</th>
<th>High Blood Pressure or Hypertension (HTN)</th>
<th>High Cholesterol</th>
<th>Osteoporosis</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Degree</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>High School Diploma or equivalent</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Master Degree</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Some college</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>Grand Total</td>
<td>17</td>
<td>3</td>
<td>4</td>
<td>14</td>
<td>26</td>
<td>23</td>
<td>2</td>
<td>89</td>
</tr>
</tbody>
</table>

Table 2: Self-Reported Medical Conditions

The demographic survey analysis further showed that 44.83% of the respondents lived alone, 37.93% lived with a spouse, and 17.24% lived with a relative or family member. The analysis also found that 13.79% of participants responded that finances never affected what they bought at the store. Average monthly incomes ranged from under $1100 to over $2501.
Table 3: Household Number

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Participant Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>I live by myself</td>
<td>44.83%</td>
</tr>
<tr>
<td>I live with my spouse</td>
<td>37.93%</td>
</tr>
<tr>
<td>I live with a relative(s) or family</td>
<td>17.24%</td>
</tr>
</tbody>
</table>

Table 4: Finances Affecting Buying

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Participant Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>13.79%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>34.48%</td>
</tr>
<tr>
<td>Often</td>
<td>24.14%</td>
</tr>
<tr>
<td>Routinely</td>
<td>27.59%</td>
</tr>
</tbody>
</table>

Table 5: Average Monthly Income
The survey consisted of 52 variables as seen in Table 6 below.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x3</td>
<td>Discuss my problems and concerns with people close to me.</td>
</tr>
<tr>
<td>x2</td>
<td>Choose a diet low in fat, saturated fat, and cholesterol.</td>
</tr>
<tr>
<td>x1</td>
<td>Report any unusual signs or symptoms to a physician or other health professional.</td>
</tr>
<tr>
<td>x4</td>
<td>Follow a planned exercise program.</td>
</tr>
<tr>
<td>x5</td>
<td>Get enough sleep.</td>
</tr>
<tr>
<td>x6</td>
<td>Feel I am growing and changing in positive ways.</td>
</tr>
<tr>
<td>x7</td>
<td>Praise other people easily for their achievements.</td>
</tr>
<tr>
<td>x8</td>
<td>Limit use of sugars and food containing sugar (sweets).</td>
</tr>
<tr>
<td>x9</td>
<td>Read or watch TV programs about improving health.</td>
</tr>
<tr>
<td>x10</td>
<td>Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).</td>
</tr>
<tr>
<td>x11</td>
<td>Take some time for relaxation each day.</td>
</tr>
<tr>
<td>x12</td>
<td>Believe that my life has purpose.</td>
</tr>
<tr>
<td>x13</td>
<td>Maintain meaningful and fulfilling relationships with others.</td>
</tr>
<tr>
<td>x14</td>
<td>Eat 6-11 servings of bread, cereal, rice and pasta each day.</td>
</tr>
<tr>
<td>x15</td>
<td>Question health professionals in order to understand their instructions.</td>
</tr>
<tr>
<td>x16</td>
<td>Take apart in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).</td>
</tr>
<tr>
<td>x17</td>
<td>Accept those things in my life which I cannot change.</td>
</tr>
<tr>
<td>x18</td>
<td>Look forward to the future.</td>
</tr>
<tr>
<td>x19</td>
<td>Spend time with close Friends.</td>
</tr>
<tr>
<td>x20</td>
<td>Eat 2-4 servings of fruit each day.</td>
</tr>
<tr>
<td>x21</td>
<td>Get a second opinion when I question my health care provider’s advice.</td>
</tr>
<tr>
<td>x22</td>
<td>Take part in leisure-time (non-exercise) physical activities (such as swimming, dancing, bicycling).</td>
</tr>
<tr>
<td>x23</td>
<td>Concentrate on pleasant thoughts at bedtime.</td>
</tr>
<tr>
<td>x24</td>
<td>Keep content and at peace with myself.</td>
</tr>
<tr>
<td>x25</td>
<td>Find it easy to show concern, love and warmth to others.</td>
</tr>
<tr>
<td>x26</td>
<td>Eat 9-11 servings of vegetables each day.</td>
</tr>
<tr>
<td>x27</td>
<td>Discuss my health concerns with health professionals.</td>
</tr>
<tr>
<td>x28</td>
<td>Do stretching exercises at least 3 times per week.</td>
</tr>
<tr>
<td>x29</td>
<td>Use specific methods to control my stress.</td>
</tr>
<tr>
<td>x30</td>
<td>Work toward long-term goals in my life.</td>
</tr>
<tr>
<td>x31</td>
<td>Touch and am touched by people I care about.</td>
</tr>
<tr>
<td>x32</td>
<td>Eat 2-3 servings of milk, yogurt or cheese each day.</td>
</tr>
<tr>
<td>x33</td>
<td>Inspect my body at least monthly for physical changes/danger signs.</td>
</tr>
<tr>
<td>x34</td>
<td>Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking).</td>
</tr>
<tr>
<td>x35</td>
<td>Balance time between work and play.</td>
</tr>
<tr>
<td>x36</td>
<td>Find each day interesting and challenging.</td>
</tr>
<tr>
<td>x37</td>
<td>Find ways to meet my needs for intimacy.</td>
</tr>
<tr>
<td>x38</td>
<td>Ask for information from health professionals about how to take good care of myself.</td>
</tr>
<tr>
<td>x39</td>
<td>Check my pulse rate when exercising.</td>
</tr>
<tr>
<td>x40</td>
<td>Practice relaxation or meditation for 15-20 minutes daily.</td>
</tr>
<tr>
<td>x41</td>
<td>Am aware of what is important to me in life.</td>
</tr>
<tr>
<td>x42</td>
<td>Get support from a network of caring people.</td>
</tr>
<tr>
<td>x43</td>
<td>Read labels to identify nutrients, fats, and sodium content in packaged food.</td>
</tr>
<tr>
<td>x44</td>
<td>Attend educational programs on personal health care.</td>
</tr>
<tr>
<td>x45</td>
<td>Reach my target heart rate when exercising.</td>
</tr>
<tr>
<td>x46</td>
<td>Pace myself to prevent tiredness.</td>
</tr>
<tr>
<td>x47</td>
<td>Feel connected with some force greater than myself.</td>
</tr>
<tr>
<td>x48</td>
<td>Settle conflicts with others through discussion and compromises.</td>
</tr>
<tr>
<td>x49</td>
<td>Eat breakfast.</td>
</tr>
<tr>
<td>x50</td>
<td>Seek guidance or counseling when necessary.</td>
</tr>
<tr>
<td>x51</td>
<td>Explore myself to new experiences and challenges.</td>
</tr>
</tbody>
</table>

Table 6: Variable List

The data from the pretest and posttest were analyzed using a paired t-test due to the primary focus of the data outcome(s) was to measure for health markers (subscale) changes. The outcome data allowed for comparison of the before/after change (See Tables Section). Thirty-seven of the 52 pairs showed a significant change (p = 0.05). Fifteen of the 52 pairings analyzed were not significant (p>.05). Subscales from the survey that did show a significant finding included the areas of Health-Promoting Lifestyle, Health Responsibility, and Nutrition. Whereas,
Spiritual Growth, Interpersonal Relations and Stress Management subscales showed marginal to no significant changes.

The paired t-test analysis revealed six (6) variables that did not change after the *Mindful Health* intervention as presented in Table 7 below. From the table of variables listed most of the participants’ significant changes occurred within the areas focused on health education, whereas, the variables that did not change occurred predominantly in areas that related to actual lifestyle changes. From the analysis, it is seen that the participants did show improvement in the pretest/posttest after the *Mindful Health* intervention in subscales that involved health education but lacked a significant change in areas that were more behavioral-focused changes.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x5</td>
<td>Get enough sleep.</td>
</tr>
<tr>
<td>x13</td>
<td>Maintain meaningful and fulfilling relationships with others.</td>
</tr>
<tr>
<td>x14</td>
<td>Eat 6-11 servings of bread, cereal, rice and pasta each day.</td>
</tr>
<tr>
<td>x16</td>
<td>Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).</td>
</tr>
<tr>
<td>x17</td>
<td>Accept those things in my life which I cannot change.</td>
</tr>
<tr>
<td>x19</td>
<td>Spend time with close friends.</td>
</tr>
<tr>
<td>x21</td>
<td>Get a second opinion when I question my health care provider's advice.</td>
</tr>
<tr>
<td>x22</td>
<td>Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).</td>
</tr>
<tr>
<td>x28</td>
<td>Do stretching exercises at least 3 times per week.</td>
</tr>
<tr>
<td>x31</td>
<td>Touch and am touched by people I care about.</td>
</tr>
<tr>
<td>x35</td>
<td>Balance time between work and play.</td>
</tr>
<tr>
<td>x37</td>
<td>Find ways to meet my needs for intimacy.</td>
</tr>
<tr>
<td>x49</td>
<td>Settle conflicts with others through discussion and compromise.</td>
</tr>
<tr>
<td>x51</td>
<td>Seek guidance or counseling when necessary.</td>
</tr>
<tr>
<td>x52</td>
<td>Expose myself to new experiences and challenges.</td>
</tr>
</tbody>
</table>

Table 7: Variables with no Significant Change Pretest/Posttest

The electronic posttest contained three (3) additional survey questions that were directly linked to the *Mindful Health* electronic and paper educational pieces provided during the project intervention. Participants provided answers in respect to their individual experience with the *Mindful Health* education pieces and the likelihood of the adopting of the education provided to their daily lives and the maintaining of the self-management of chronic disease(s). Of the 25 participants, 100% responded that both the electronic and paper (newsletters, tri-fold quick reference guides) were helpful to them. The applying of the knowledge gained from the *Mindful Health* education pieces, 84% of the participants stated they were “very likely” to use the
information received in their daily lives, while 16% stated they were “likely” to use the content from the intervention.

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Participant Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 9: Electronic/Paper Mindful Health Material Beneficial

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Participant Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Likely</td>
<td>0%</td>
</tr>
<tr>
<td>Likely (4)</td>
<td>16%</td>
</tr>
<tr>
<td>Very Likely (21)</td>
<td>84%</td>
</tr>
</tbody>
</table>

Table 10: Likelihood of Using Mindful Health Education in Chronic Disease Management

**Limitations and Future Projects**

The majority of the response pairings (37/52) from the paired t-test showed statistically significant changes having occurred between the pretest and posttest. Improvements were seen in the education aspects of the subscales on the pre/posttest survey(s) whereas, physical aspects of the scale did not gather enough of a significant change or had only marginal changes after the Mindful Health intervention. Overall, participants expressed on the final survey through the intervention-specific questions that the Mindful Health material did help in their daily lives and was an effective method for the provision of health promotion education.

The physical activity levels of the participants did not change enough to be of significance to the outcomes of this project. This could be due in part to the limited time in which this project was implemented. The six-week time period may need to be extended to a longer duration to allow for better retention of the education provided. This could have also been caused by the participant’s natural behavioral patterns. Behaviors involve the spontaneous action of the individual without a set upon “map”, but rather, the person just does the motion since it has been engrained into their lives or as a learned behavior. The extended intervention time may
allow for the participants’ learned behavioral patterns to be improved upon and new health promoting behaviors created. The benefit of this study method is that it can be considered an observational study which involves the participants acting in their natural environments without limiting the generalizability of the project.

The *Mindful Health* education pieces relied on the participants’ ability to both use and be familiar with electronic devices for the receiving of the weekly electronic pieces that were sent for the intervention. Limitations in the knowledge of computer use or lack of availability to a computer potentially disrupt a major portion of the intervention and its educational material. Paper copies of the newsletters and quick reference tri-fold guides that were mailed directly to the participants’ address may be a more effective method.

Project barriers encountered during the project that decreased response and data for analysis included; delayed return of surveys, incorrect/changed patient emails or addresses, and the voluntary withdrawal from the project by the participant not completing the post intervention survey. Future projects to explore the effectiveness of providing health promotion education pieces through electronic and paper methods could be expanded to allow for a longer intervention time, involve multiple senior center(s) in the surrounding area or further for comparison, and the addition of on-site educational classes to support the education being provided in the electronic/paper forms.

**Application to Practice**

With the prevalence of chronic diseases increasing, it is imperative to implement programs like *Mindful Health* that have strategies geared towards the optimum attainment of patient health. The direct involvement of the patient in the development of a self-management
plan for chronic disease(s) will allow for patient autonomy with an increased potential for successful implementation.

The findings of this project have implications for nursing practice. The results founded by the *Mindful Health* intervention can be applied to the care of patients or individuals and their family members. The purpose of this project was to evaluate the effects of education on nutrition and exercise as a means to elicit positive behavioral changes in older adults. The project followed a sample for a six-week time period to learn if the provision of health promotion education used in the *Mindful Health* intervention would help endorse the adoption of a chronic disease self-management plan into the participant’s daily lifestyle. The project costs involved the mailing of the monthly newsletters and tri-fold quick reference tools (2), printing of the newsletters, flyers, consent forms and recruitment day gift for participation in the project. Overall costs for the project was approximately $300.

The project being implemented is directly relevant to the participant’s daily self-management activities and can provide insights into improving their nutritional knowledge and exercise frequency causing overall improvement in health status and the potential to decrease medical expenses. The potential benefits of this project are the identification of the facilitators and barriers to nutrition, exercise, and the participants beliefs/attitudes towards each subject. The results of this project will enable improvements to the individual’s knowledge, behaviors, and application to nutrition and exercise used in their daily lives.

Factors identified in this project will assist in the improvement of education and motivation provided to patients in the clinical setting and frequency of exercises performed. The positive impact on patient care could potentially lead to improved patient outcomes, shorter hospital stays, and decrease unnecessary health-care costs. The implementation of the survey tool
Health-Promoting Lifestyle Profile II, immediately following and in the subsequent months of the *Mindful Health* education would be both feasible and is a sustainable method that offers immediate feedback on the overall individuals’ views regarding the educational service that was provided while at the senior center or other care facilities.

**Conclusions**

The Project Leader (PL) conducted the project that used a quantative, empirical approach. The project was based on the theoretical nursing framework of Hildegard E. Peplau’s Interpersonal Relations Theory. The sample included 25 participants who partook in the services provided at a not-for-profit senior center located in a large metropolitan location. Over a six-week period each participant was supplied with electronic and paper forms of health promotion educational material created by the PL. Within each educational piece topics covered included disease pathology, nutrition, exercise, and motivation.

The ten (10) demographical questions were further analyzed using differential and inferential statistics. The analysis revealed that 44.83% of the participants lived alone with a monthly income under $1100 (31.03%). Participants with a high school diploma or equivalent (n=6) totaled 28 medical conditions, while those with some college (n=9) totaled 30.

Overall, most of the health outcome markers showed improvements after the *Mindful Health* intervention. The majority of the response pairs (37/52) were statistically significant showing improvement in the subscales of Health-Promoting Lifestyle, Health Responsibility, and Nutrition. Fifteen variable response pairs did not show significant or only marginal changes. These subscales included Spiritual Growth, Interpersonal Relations, and Stress Management all of which may be possibly linked to the behavioral habits of the participants. A number of
implications for nursing practice and methods to effectively increase care for individuals through the deliverance of health promotion educational pieces were identified.
Professional Journal Selection

The *Journal of Nutrition in Gerontology and Geriatrics* is an international journal that is published four times a year. The journal publishes original research studies that are relevant to both clinical and community nutrition issues that affect the aging adult. Topics include but are not limited to studies of preventative nutrition, aging effects on nutritional requirements, nutritional status and dietary intake behaviors, nutritional interventions for chronic disease and community nutrition issues.

*Journal of Nutrition in Gerontology and Geriatrics* has been publishing peer-reviewed original studies since 2011. Formerly this publication was known as *Journal of Nutrition for the Elderly* which was published between 1980-2010 before transitioning over to the current publication title. The *Journal of Nutrition in Gerontology and Geriatrics* had an impact factor of 1.29 in 2018.
Initiation of a Health Promotion Program in Chronic Disease Self-Management

for Senior Center Participants

by

Suzanne E. Slovak BSN, RN

Lenora Smith PhD, FNP-BC, RN

Fred Ahrens PhD, PE

Angela Caires DNP, CRNP
Abstract

This project aimed to determine the effectiveness of health promotion education with the increasing of health promotion knowledge, positive behavioral changes and chronic disease self-management implementation for individuals within the senior center environment. A six-week period was allotted during which eight electronic educational pieces and two mailed newsletters and quick reference guides containing health promotion education were distributed. The 52-item Health-Promoting Lifestyle Profile II survey was used to measure six subscale sections including spiritual growth, interpersonal relations, stress management, health responsibility, physical activity and nutrition. The sample consisted of 9 males (n=9) with a mean age of 72.22 and 16 females (n=16), mean age of 73.0. From the analysis, improvements in the pretest/posttest occurred after the intervention in subscales such as Health Promoting Lifestyle, Health Responsibility, and Nutrition. Subgroups that did not show a significant or marginal change included Spiritual Growth, Interpersonal Relations, Physical Activity, and Stress Management.

Keywords:

‘self-management’, ‘chronic disease management’, ‘senior center’, ‘health promotion’
**Introduction**

By 2030 it is projected that one in five people living in the United States will be over the age of 65 (Simpson, Edwards, & Berlin, 2018). The increasing life expectancy creates the potential for lifestyle behaviors that can increase the complexity of caring for this population including: inadequate dietary habits, sedentary lifestyle, and further complications due to coexisting chronic diseases (Simpson, Edwards, & Berlin, 2018). Providers can encourage patient independence and health promotion through the use of education with information on potential health risks, health promotion methods, the creation of an individualized self-management plan, and patient safety measures.

As the average life expectancy increases in the United States, the provision of health promotion education can play a vital role in the successful aging of individuals over the age of 65 (Olvari, Taylor, McGuire, Baumgart, Lock, Whiting,…Thorpe, 2018). Since the passing of the Older Americans Act (OAA) in 1965 and its focus on the provision of comprehensive services for the aging, senior centers have become one of the most used services among this population nearing 11,000 centers and serving over 1 million older adults daily (Administration on Aging [AOA], 2015). Historically, individuals that participate in senior center programs have shown improvements in several areas including their physical, social, mental, economic and spiritual well-being (AOA, 2015). Senior centers are poised to play an integral role in the aging baby boomer generation and its two-thirds representation of individuals over the age of 50, with its diverse programs allowing for the successful management of chronic diseases through education and health promotion.

The path to successful aging involves more than correct genes, but rather, the individual must be actively engaged in the management of chronic disease(s) achieved through behavioral
and lifestyle changes (Cramm, Hartgerink, Vreede, Bakker, Steyerberg, Mackenbach & Nieboer, 2012). The Centers for Disease Control and Prevention states six in ten adults in the United States have a chronic disease, with four in ten having two or more conditions (CDC, 2019). Chronic conditions are the leading causes of death and disability and the primary contributor to the $3.3 trillion annual cost for health care (CDC, 2019). The key lifestyle risks for the development of chronic diseases are; tobacco use, poor nutrition, lack of physical activity and excessive use of alcohol (CDC, 2019). An increasing amount of studies have proposed that the prevention of the age-related decline could be more effective than preventing the consequences experienced from a disease pathology (Cramm et al., 2012, Rockwood et al., 1994). The implementation of varying self-management interventions is most effective when executed during the initial experiencing of symptoms rather than after time has elapsed (Cramm et al., 2012). The application of a health promotion self-management plan will allow the individual to have an active role in the design and execution of the plan including the use of problem-solving skills, self-efficacy, and the managing of the necessary lifestyle and behavioral changes that will promote successful adherence and outcomes.

Older adults over the age of 65 are an especially vulnerable group when planning a chronic disease self-management plan due to the potential for decreased knowledge and health literacy (Ownby, Waldrop-Valverde & Taha, 2012, Ashida, Goodman, Pandya, Koehly, Lachance & Stafford, 2011, Jovic-Vranes & Bjegovic-Mikanovic, 2012, Von Wagner, Knight, Steptoe & Wardle, 2007, Kutner, Greenburg, Jin & Paulsen, 2006, Geboers, Wonter, Spoorenberg, Wynia, Reijneveld…Reijneveld S.A., 2016). Individuals that display low levels of health literacy have been shown to exhibit an increased likelihood of adverse health outcomes including; recurrent hospitalizations, increased mortality rates and a decreased quality of life

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Self-management abilities become particularly important when the individual faces the loss of a function necessary in maintaining their baseline quality of life. Interventions geared toward a health or disease-related self-management plan have been developed to allow for the effective use in daily functions such as; taking medication, exercising, dietary choices, and the cessation of smoking (Cramm et al., 2013, Clark, Janz, Becker, Schork, Wheeler, Liang…, 1992, Lorig, Ritter & Plant, 1999). As the elderly adult population continues to grow, Americans over the age of 65 will be living with one or more chronic illnesses or disabilities (Ruggiano, Shtompei, Whiteman & Sias, 2017). The implementation of a chronic disease self-management plans allows the individual to cope with symptoms, to apply strategies for prevention and allows for communication between healthcare providers and families (Skarupski & Pelkowski, 2014, Meranius & Hammar, 2016).

Health promotion education provided to the individual has the potential to encourage behavioral and lifestyle changes that increase health outcomes. Nutrition is an important topic and is closely linked to the successful aging and the health status of the individual. Individuals that participate at area senior centers while receiving additional health promotion education potentially creates lasting changes in daily lifestyles while promoting successful health outcomes and quality of life. Chronic health problems affect older adults causing limitations of activities of daily living (ADLs) leading to further declines in functionality and disabilities (Kwok, Au & Li-Tsang, 2016, Laforest, Nour, Parisien, Poirier, Gignac & Lankoande, 2007). The knowledge gained by the patient through education and interventions help reduce patient symptoms and
improves patient outcomes more than the use of medications alone (Laforest et al., 2007, Espinoza, Espinoza, Wilson & Denton, 2018).

In an aging society, patient understanding of chronic disease self-management is critical. The increasing lifespan of patients have created a need for improvements to be made in the management of chronic illnesses and medical advancements. Within the aged population, lower rates of adherence to prescribed medications and self-management plans have been experienced from the lack of education and the potential for decreased health literacy (Laforest et al., 2007, Espinoza, Espinoza, Wilson & Denton, 2018). Health promotion education allows for the building of knowledge regarding chronic disease management allowing for improved patient outcomes and increased adherence to self-management plans.

**Materials and Methods**

The purpose of this project was to evaluate the effectiveness of health promotion education through the use of the intervention and created material in *Mindful Health* for increasing chronic disease self-management plan implementation in senior center participants. The design utilizes a quantitative, phenomenological method. The population consists of patients who met the criteria for participation in senior center activities. A non-probability, convenience sample was used drawing from the patients participating in the senior center services located in a large metropolitan area. After receiving Institutional Review Board (IRB) approval at the project facilities and written informed consent from participants, data was collected using a validated 52-question survey with a separate demographic section.

The study sample was a nonprobability, convenience sample of 25 patients (n=25) who participated in the programs sponsored by the senior center. Inclusion criteria for patient subject selection included: (a) patients who attended the senior center; (b) participated in the programs
sponsored by the senior center; (c) read and speak English; (d) willingness to complete the electronic survey(s); (e) had access to the internet; and (f) had a valid email address. The sample size consisted of 25 participants, (9) male (n=9) and (16) female (n=16). The Primary Investigator (PI) recruited subjects for the project with flyers advertising the project recruitment dates and face-to-face encounters from the senior center where the sponsored programs were conducted. Signed letters of consents were secured on the day of recruitment after the project intent and focus were explained to the individuals. Upon approval, each subject completed the initial paper form of the survey at that time.

Participants received eight (8) total electronically sent *Mindful Health* educational emails and two (2) monthly *Mindful Health* educational quick reference tri-fold guides with newsletters that contained expanded sections on disease pathology, motivation, nutrition and fitness that were applicable to this population and income level for the six-week project duration. A monthly mailed newsletter (2 total) was sent out that was a more in-depth form of the emails covering disease pathology, motivation, exercise and nutrition with recipes. The quick reference tri-fold guides (2) that was sent with the monthly newsletters was a quick reference tool for the participant to refer to for a condensed narrative of either a disease pathology or nutritional supplement.

The participants completed a paper copy of the survey on the day of recruitment. The survey contained an additional ten (10) question section concerning the participant’s demographic information. The participants completed the identical survey with the addition of three (3) questions pertaining to the project intervention for the posttest survey upon completion of the six-week project. The Health-Promoting Lifestyle Profile II was created by Susan Noble Walker, EdD, RN, FAAN, Karen R. Sechrist, PhD, RN, FAAN, and Nola J. Pender, PhD, RN,
FAAN (Walker, Sechrist & Pender, 1995). Originally created in 1987 the survey had undergone revisions for the creation of the second version used in the project. Permission was obtained from the author to use the copyrighted tool in its entirety. The 52-item survey uses a 4-point response format to measure the frequency of reported health-promoting behaviors in the fields of health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations and stress management. Content, criterion-related and construct validity was verified through analysis and through literature reviews that have used the Health-Promoting Lifestyle Profile II tool.

**Results**

Initial recruitment for the projected secured 29 participants; 9 males (n = 9), 20 females (n = 20). Marital status from the demographic survey revealed 12 (n = 12) widowed, 11 (n = 11) married, 5 (n = 5) divorced, and 1 (n = 1) other/single. The mean age for the female participants was 73.0, whereas, the mean age for males was 72.22. The mean weight for the female participants was 184.75 pounds, while the male mean was 201.67 pounds. The self-reported medical conditions by the initial group reported 29.2% had hypertension, 25.8% with high cholesterol, 19.1% arthritis, 15.7% Diabetes Mellitus, 4.5% Coronary Artery Disease, 3.4% Congestive Heart Failure, and 2.2% other (cancer or none).

<table>
<thead>
<tr>
<th>Row Labels</th>
<th>Arthritis</th>
<th>Congestive Heart Failure (CHF)</th>
<th>Coronary Artery Disease (CAD)</th>
<th>Diabetes Mellitus (DM)</th>
<th>High Blood Pressure or Hypertension (HTN)</th>
<th>High Cholesterol</th>
<th>Osteoporosis</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Degree</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>8</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bachelor Degree</td>
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<td>2</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>High School Diploma or equivalent</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>6</td>
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<td>4</td>
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</tr>
<tr>
<td>Some college</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>9</td>
<td>7</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Grand Total</td>
<td>17</td>
<td>3</td>
<td>4</td>
<td>14</td>
<td>26</td>
<td>23</td>
<td>2</td>
<td>89</td>
</tr>
</tbody>
</table>

Table 1: Self-Reported Medical Conditions by Education Level

The demographic survey analysis further showed that 44.83% of the respondents lived alone, 37.93% lived with a spouse, and 17.24% lived with a relative or family member. The analysis also found that 13.79% of participants never had finances affect what they bought at the
store, 34.48% sometimes did, 24.14% it often occurred, and 27.59% routinely found their finances affected what they bought at the store.

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Participant Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $1100</td>
<td>31.03%</td>
</tr>
<tr>
<td>$1101-$1500</td>
<td>17.24%</td>
</tr>
<tr>
<td>$1501-$2000</td>
<td>10.34%</td>
</tr>
<tr>
<td>$2001-$2500</td>
<td>17.24%</td>
</tr>
<tr>
<td>Over $2501</td>
<td>24.14%</td>
</tr>
</tbody>
</table>

Table 2: Average Monthly Income

The primary focus of the data outcome(s) was to measure for health markers (subscale) changes, a paired t-test was used for comparison of the before/after changes. Thirty-seven of the 52 pairs showed a significant change (p = 0.05). Fifteen of the 52 pairings analyzed were not significant (p=>.05). Subscales from the survey that did show a significant finding included the areas of Health-Promoting Lifestyle, Health Responsibility, and Nutrition. Whereas, Spiritual Growth, Interpersonal Relations and Stress Management subscales showed marginal to no significant changes.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x5</td>
<td>Get enough sleep.</td>
</tr>
<tr>
<td>x13</td>
<td>Maintain meaningful and fulfilling relationships with others.</td>
</tr>
<tr>
<td>x14</td>
<td>Eat 6-11 servings of bread, cereal, rice and pasta each day.</td>
</tr>
<tr>
<td>x16</td>
<td>Take apart in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).</td>
</tr>
<tr>
<td>x17</td>
<td>Accept those things in my life which I cannot change.</td>
</tr>
<tr>
<td>x19</td>
<td>Spend time with close friends.</td>
</tr>
<tr>
<td>x21</td>
<td>Get a second opinion when I question my health care provider's advice.</td>
</tr>
<tr>
<td>x22</td>
<td>Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).</td>
</tr>
<tr>
<td>x28</td>
<td>Do stretching exercises at least 3 times per week.</td>
</tr>
<tr>
<td>x31</td>
<td>Touch and am touched by people I care about.</td>
</tr>
<tr>
<td>x35</td>
<td>Balance time between work and play.</td>
</tr>
<tr>
<td>x37</td>
<td>Find ways to meet my needs for intimacy.</td>
</tr>
<tr>
<td>x49</td>
<td>Settle conflicts with others through discussion and compromise.</td>
</tr>
<tr>
<td>x51</td>
<td>Seek guidance or counseling when necessary.</td>
</tr>
<tr>
<td>x52</td>
<td>Expose myself to new experiences and challenges.</td>
</tr>
</tbody>
</table>

Table 3: Variables with no significant change pretest/posttest
Discussion

The majority of the response pairings (37/52) from the paired t-test showed statistically significant changes (p=.05) having occurred between the pretest and posttest. Improvements were seen in the education aspects of the subscales on the pre/posttest survey(s) whereas, physical aspects of the scale did not gather enough of a significant change (p=>.05) or had only marginal changes after the Mindful Health intervention. Overall, participants expressed on the final survey through the intervention-specific questions that the Mindful Health material did help in their daily lives and was an effective method for the provision of health promotion education.

The physical activity levels of the participants did not change enough to be of significance to the outcomes of this project. This could be due in part to the limited time in which this project was implemented. The six-week time period may need to be extended to a longer duration to allow for better retention of the education provided. The extended intervention time may allow for the participants’ learned behavioral patterns to be improved upon and new health promoting behaviors created. The benefit of this study method is that it can be considered an observational study which involves the participants acting in their natural environments without limiting the generalizability of the project.

The Mindful Health education pieces relied on the participants’ ability to both use and be familiar with electronic devices for the receiving of the weekly electronic pieces that were sent for the intervention. Limitations in the knowledge of computer use or lack of availability to a computer potentially disrupt a major portion of the intervention and its educational material. Paper copies of the newsletters and quick reference tri-fold guides that were mailed directly to the participants’ address may be a more effective method.
Project barriers encountered during the project that decreased response and data for analysis included; delayed return of surveys, incorrect/changed patient emails or addresses, and the voluntary withdrawal from the project by the participant not completing the post intervention survey. Future projects to explore the effectiveness of providing health promotion education pieces through electronic and paper methods could be expanded to allow for a longer intervention time, involve multiple senior center(s) in the surrounding area or further for comparison, and the addition of on-site educational classes to support the education being provided in the electronic/paper forms.

Acknowledgments

I would like to acknowledge the help I received throughout my Doctor of Nursing Practice (DNP) program from committee chair; Lenora Smith PhD, FNP-BC, RN, clinical mentor; Angela Caires DNP, CRNP, and advisement from Fred Ahrens PhD, PE.

Declaration of Interest

Suzanne E. Slovak BSN, RN, Lenora Smith PhD, FNP-BC, RN, Angela Caires DNP, CRNP, and Fred Ahrens PhD, PE certify that they have no associations with or participation in any organization or entity with any financial interests or non-financial interests in the project focus or educational materials discussed within the submitted manuscript.
### Non-Response Profile

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Mean Age</th>
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<tr>
<td><strong>Female</strong></td>
<td>4</td>
<td>70.75</td>
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<td>Associate Degree</td>
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<td>61.5</td>
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<tr>
<td>High School Diploma or equivalent</td>
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<td>80</td>
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<tr>
<td><strong>(blank)</strong></td>
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</tr>
<tr>
<td><strong>Overall</strong></td>
<td>4</td>
<td>70.75</td>
</tr>
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### Self-Reported Medical Conditions

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<thead>
<tr>
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<td>3</td>
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<tr>
<td>High School Diploma or equivalent</td>
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<td>1</td>
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<td>9</td>
<td>7</td>
<td>1</td>
<td>30</td>
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<tr>
<td><strong>Grand Total</strong></td>
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<td>14</td>
<td>26</td>
<td>23</td>
<td>2</td>
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### Household Number

<table>
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<th>Answer Choices</th>
<th>Participant Responses</th>
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<tbody>
<tr>
<td>I live by myself</td>
<td>44.83%</td>
</tr>
<tr>
<td>I live with my spouse</td>
<td>37.93%</td>
</tr>
<tr>
<td>I live with a relative(s) or family</td>
<td>17.24%</td>
</tr>
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</table>

### Finances Affecting Buying

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Participant Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>13.79%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>34.48%</td>
</tr>
<tr>
<td>Often</td>
<td>24.14%</td>
</tr>
<tr>
<td>Routinely</td>
<td>27.59%</td>
</tr>
</tbody>
</table>
## Average Monthly Income

<table>
<thead>
<tr>
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<td>10.34%</td>
</tr>
<tr>
<td>$2001-$2500</td>
<td>17.24%</td>
</tr>
<tr>
<td>Over $2501</td>
<td>24.14%</td>
</tr>
</tbody>
</table>

## Emails/Newsletters Beneficial

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Participant Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0%</td>
</tr>
</tbody>
</table>

## Likelihood of Using Education from Mindful Health Material

<p>| Not Likely | 0%     |
| Likel (4)   | 16%    |
| Very Likely (21) | 84% |</p>
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x1</td>
<td>Discuss my problems and concerns with people close to me.</td>
</tr>
<tr>
<td>x2</td>
<td>Choose a diet low in fat, saturated fat, and cholesterol.</td>
</tr>
<tr>
<td>x3</td>
<td>Report any unusual signs or symptoms to a physician or other health professional.</td>
</tr>
<tr>
<td>x4</td>
<td>Follow a planned exercise program.</td>
</tr>
<tr>
<td>x5</td>
<td>Get enough sleep.</td>
</tr>
<tr>
<td>x6</td>
<td>Feel I am growing and changing in positive ways.</td>
</tr>
<tr>
<td>x7</td>
<td>Praise other people easily for their achievements.</td>
</tr>
<tr>
<td>x8</td>
<td>Limit use of sugars and food containing sugar (sweets).</td>
</tr>
<tr>
<td>x9</td>
<td>Read or watch TV programs about improving health.</td>
</tr>
<tr>
<td>x10</td>
<td>Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).</td>
</tr>
<tr>
<td>x11</td>
<td>Take some time for relaxation each day.</td>
</tr>
<tr>
<td>x12</td>
<td>Believe that my life has purpose.</td>
</tr>
<tr>
<td>x13</td>
<td>Maintain meaningful and fulfilling relationships with others.</td>
</tr>
<tr>
<td>x14</td>
<td>Eat 6-11 servings of bread, cereal, rice and pasta each day.</td>
</tr>
<tr>
<td>x15</td>
<td>Question health professionals in order to understand their instructions.</td>
</tr>
<tr>
<td>x16</td>
<td>Take apart in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).</td>
</tr>
<tr>
<td>x17</td>
<td>Accept those things in my life which I cannot change.</td>
</tr>
<tr>
<td>x18</td>
<td>Look forward to the future.</td>
</tr>
<tr>
<td>x19</td>
<td>Spend time with close friends.</td>
</tr>
<tr>
<td>x20</td>
<td>Eat 2-4 servings of fruit each day.</td>
</tr>
<tr>
<td>x21</td>
<td>Get a second opinion when I question my health care provider's advice.</td>
</tr>
<tr>
<td>x22</td>
<td>Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).</td>
</tr>
<tr>
<td>x23</td>
<td>Concentrate on pleasant thoughts at bedtime.</td>
</tr>
<tr>
<td>x24</td>
<td>Feel content and at peace with myself.</td>
</tr>
<tr>
<td>x25</td>
<td>Find it easy to show concern, love and warmth to others.</td>
</tr>
<tr>
<td>x26</td>
<td>Eat 3-5 servings of vegetables each day.</td>
</tr>
<tr>
<td>x27</td>
<td>Discuss my health concerns with health professionals.</td>
</tr>
<tr>
<td>x28</td>
<td>Do stretching exercises at least 3 times per week.</td>
</tr>
<tr>
<td>x29</td>
<td>Use specific methods to control my stress.</td>
</tr>
<tr>
<td>x30</td>
<td>Work toward long-term goals in my life.</td>
</tr>
<tr>
<td>x31</td>
<td>Touch and am touched by people I care about.</td>
</tr>
<tr>
<td>x32</td>
<td>Eat 2-3 servings of milk, yogurt or cheese each day.</td>
</tr>
<tr>
<td>x33</td>
<td>Inspect my body at least monthly for physical changes/danger signs.</td>
</tr>
<tr>
<td>x34</td>
<td>Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking).</td>
</tr>
<tr>
<td>x35</td>
<td>Balance time between work and play.</td>
</tr>
<tr>
<td>x36</td>
<td>Find each day interesting and challenging.</td>
</tr>
<tr>
<td>x37</td>
<td>Find ways to meet my needs for intimacy.</td>
</tr>
<tr>
<td>x38</td>
<td>Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day.</td>
</tr>
<tr>
<td>x39</td>
<td>Ask for information from health professionals about how to take good care of myself.</td>
</tr>
<tr>
<td>x40</td>
<td>Check my pulse rate when exercising.</td>
</tr>
<tr>
<td>x41</td>
<td>Practice relaxation or meditation for 15-20 minutes daily.</td>
</tr>
<tr>
<td>x42</td>
<td>Am aware of what is important to me in life.</td>
</tr>
<tr>
<td>x43</td>
<td>Get support from a network of caring people.</td>
</tr>
<tr>
<td>x44</td>
<td>Read labels to identify nutrients, fats, and sodium content in packaged food.</td>
</tr>
<tr>
<td>x45</td>
<td>Attend educational programs on personal health care.</td>
</tr>
<tr>
<td>x46</td>
<td>Reach my target heart rate when exercising.</td>
</tr>
<tr>
<td>x47</td>
<td>Pace myself to prevent tiredness.</td>
</tr>
<tr>
<td>x48</td>
<td>Feel connected with some force greater than myself.</td>
</tr>
<tr>
<td>x49</td>
<td>Settle conflicts with others through discussion and compromise.</td>
</tr>
<tr>
<td>x50</td>
<td>Eat breakfast.</td>
</tr>
<tr>
<td>x51</td>
<td>Seek guidance or counseling when necessary.</td>
</tr>
<tr>
<td>x52</td>
<td>Expose myself to new experiences and challenges.</td>
</tr>
</tbody>
</table>
### Paired t-Test Results

#### Notes
- Source Data: Sample, n, Mean, SD, SE, and 95% CI for μ_difference
- Test: Paired t-Test
- Mean Differences (μ_difference)
- Estimation for Paired Difference
- StDev
- P-Value

#### Estimation for Paired Difference

<table>
<thead>
<tr>
<th>Source</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
<th>95% CI for μ_difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source 1</td>
<td>25</td>
<td>3.48</td>
<td>0.72</td>
<td>0.18</td>
<td>(-0.71, 0.01)</td>
</tr>
<tr>
<td>Source 2</td>
<td>25</td>
<td>3.32</td>
<td>0.70</td>
<td>0.17</td>
<td>(-0.76, 0.00)</td>
</tr>
<tr>
<td>Source 3</td>
<td>25</td>
<td>2.32</td>
<td>0.65</td>
<td>0.16</td>
<td>(-1.05, -0.25)</td>
</tr>
<tr>
<td>Source 4</td>
<td>25</td>
<td>2.12</td>
<td>0.64</td>
<td>0.16</td>
<td>(-0.81, -0.35)</td>
</tr>
</tbody>
</table>

#### Sample Description

- Mean: 3.72
- SD: 0.89
- SE: 0.11

#### Null Hypothesis
- H₀: µ_difference = 0

#### Paired t-Test Results

<table>
<thead>
<tr>
<th>Source</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source 1</td>
<td>25</td>
<td>3.48</td>
<td>0.72</td>
<td>0.18</td>
<td>0.66</td>
</tr>
<tr>
<td>Source 2</td>
<td>25</td>
<td>3.32</td>
<td>0.70</td>
<td>0.17</td>
<td>0.60</td>
</tr>
<tr>
<td>Source 3</td>
<td>25</td>
<td>2.32</td>
<td>0.65</td>
<td>0.16</td>
<td>0.17</td>
</tr>
<tr>
<td>Source 4</td>
<td>25</td>
<td>2.12</td>
<td>0.64</td>
<td>0.16</td>
<td>0.05</td>
</tr>
</tbody>
</table>

#### Mean Differences (μ_difference)

- Estimated: 0.10
- Standard Error: 0.02
- 95% CI: (-0.10, 0.20)

#### StDev

- Estimated: 0.64
- 95% CI: (0.55, 0.74)

#### P-Value

- Estimated: 0.01
- 95% CI: (0.00, 0.02)
Variables with no Significant Change Pretest/Posttest

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x5</td>
<td>Get enough sleep.</td>
</tr>
<tr>
<td>x13</td>
<td>Maintain meaningful and fulfilling relationships with others.</td>
</tr>
<tr>
<td>x14</td>
<td>Eat 6-11 servings of bread, cereal, rice and pasta each day.</td>
</tr>
<tr>
<td>x16</td>
<td>Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).</td>
</tr>
<tr>
<td>x17</td>
<td>Accept those things in my life which I cannot change.</td>
</tr>
<tr>
<td>x19</td>
<td>Spend time with close friends.</td>
</tr>
<tr>
<td>x21</td>
<td>Get a second opinion when I question my health care provider's advice.</td>
</tr>
<tr>
<td>x22</td>
<td>Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).</td>
</tr>
<tr>
<td>x28</td>
<td>Do stretching exercises at least 3 times per week.</td>
</tr>
<tr>
<td>x31</td>
<td>Touch and am touched by people I care about.</td>
</tr>
<tr>
<td>x35</td>
<td>Balance time between work and play.</td>
</tr>
<tr>
<td>x37</td>
<td>Find ways to meet my needs for intimacy.</td>
</tr>
<tr>
<td>x49</td>
<td>Settle conflicts with others through discussion and compromise.</td>
</tr>
<tr>
<td>x51</td>
<td>Seek guidance or counseling when necessary.</td>
</tr>
<tr>
<td>x52</td>
<td>Expose myself to new experiences and challenges.</td>
</tr>
</tbody>
</table>
FIGURES

Hildegard Peplau’s Theory of Interpersonal Relations

Orientation Phase
- Development of relationship between provider and patient
- Assessment of patient needs

Working Phase
- Identification of patient wanting improved health
- Provider roles: resource person, counselor, surrogate and teacher

Resolution Phase
- Patient’s continual movement from dependence to independence
- Mutual termination of relationship

Pretest Gender Chart

Pareto Chart of Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percent</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>20</td>
<td>69.0</td>
<td>69.0</td>
</tr>
<tr>
<td>Male</td>
<td>9</td>
<td>31.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Marital Status

Pareto Chart of Marital Status

Female Age

Summary Report for Age
Gender = Female

Anderson-Darling Normality Test
A-Squared 0.64
P-Value 0.080

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>71.000</td>
</tr>
<tr>
<td>StdDev</td>
<td>7.327</td>
</tr>
<tr>
<td>Variance</td>
<td>51.884</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.55931</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-1.00958</td>
</tr>
<tr>
<td>N</td>
<td>20</td>
</tr>
<tr>
<td>Minimum</td>
<td>60.000</td>
</tr>
<tr>
<td>1st Quartile</td>
<td>66.500</td>
</tr>
<tr>
<td>Median</td>
<td>75.500</td>
</tr>
<tr>
<td>3rd Quartile</td>
<td>79.000</td>
</tr>
<tr>
<td>Maximum</td>
<td>83.000</td>
</tr>
<tr>
<td>95% Confidence Interval for Mean</td>
<td>69.571 76.429</td>
</tr>
<tr>
<td>95% Confidence Interval for Median</td>
<td>69.470 78.530</td>
</tr>
<tr>
<td>95% Confidence Interval for StdDev</td>
<td>5.572 10.702</td>
</tr>
</tbody>
</table>
Male Age

Summary Report for Age
Gender = Male

Anderson-Darling Normality Test
A-Squared
P-Value
Mean
StdDev
Variance
Skewness
Kurtosis
N

Minimum
1st Quartile
Median
3rd Quartile
Maximum
95% Confidence Interval for Mean
95% Confidence Interval for Median
95% Confidence Interval for StdDev

Female Weight

Summary Report for Weight
Gender = Female

Anderson-Darling Normality Test
A-Squared
P-Value
Mean
StdDev
Variance
Skewness
Kurtosis
N

Minimum
1st Quartile
Median
3rd Quartile
Maximum
95% Confidence Interval for Mean
95% Confidence Interval for Median
95% Confidence Interval for StdDev

61
Male Weight

Summary Report for Weight
Gender = Male

Anderson-Darling Normality Test
- A-Squared: 0.35
- P-Value: 0.379

- Mean: 201.47
- StdDev: 36.57
- Variance: 1337.50
- Skewness: 0.539646
- Kurtosis: -0.449422
- N: 9

- Minimum: 155.00
- 1st Quartile: 172.50
- Median: 195.00
- 3rd Quartile: 232.50
- Maximum: 260.00

95% Confidence Interval for Mean
173.56 - 229.78

95% Confidence Interval for Median
165.70 - 244.74

95% Confidence Interval for StdDev
24.70 - 70.66

95% Confidence Intervals

Education by Gender

Pareto Chart of Education by Gender

- Education: Bachelor Degree, Some college, High School Diploma or equivalent, Associate Degree, Master Degree

Count

- Gender = Female
- Gender = Male

Education
Participant Ethnicity

<table>
<thead>
<tr>
<th>Race</th>
<th>Count</th>
<th>Percent</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back or African American</td>
<td>13</td>
<td>44.8</td>
<td>44.8</td>
</tr>
<tr>
<td>White or Caucasian</td>
<td>13</td>
<td>44.8</td>
<td>89.7</td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
<td>6.9</td>
<td>96.6</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>3.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Self-Reported Medical Conditions

<table>
<thead>
<tr>
<th>Medical Condition</th>
<th>Count</th>
<th>Percent</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Blood Pressure or Hypertension (HTN)</td>
<td>26</td>
<td>29.2</td>
<td>29.2</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>23</td>
<td>25.8</td>
<td>55.1</td>
</tr>
<tr>
<td>Diabetes</td>
<td>17</td>
<td>19.1</td>
<td>74.2</td>
</tr>
<tr>
<td>Heart Attack (CAD)</td>
<td>14</td>
<td>15.7</td>
<td>89.9</td>
</tr>
<tr>
<td>Stroke</td>
<td>4</td>
<td>4.5</td>
<td>94.4</td>
</tr>
<tr>
<td>Congestive Heart Failure (CHF)</td>
<td>3</td>
<td>3.4</td>
<td>97.8</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2.2</td>
<td>100.0</td>
</tr>
</tbody>
</table>
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[https://dx.doi.org/10.1097%2FNNR.0b013e318298aa55](https://dx.doi.org/10.1097%2FNNR.0b013e318298aa55)

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doi:10.1177/0894318408329339


doi: 10.1001/jama.283.1.59


PMID: 8313261


https://doi.org/elib.uah.edu/10.1080/08964289.2015.1065788


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APPENDIX A

Research Flyer

WE WANT TO LEARN MORE ABOUT…

The effects of education and motivation on nutrition and exercise as a means to elicit positive behavioral changes in older adults.

We want your help.

Doctoral Project at the University of Alabama in Huntsville investigating the effect of education and motivation for older adults’ health.

When will this study take place?
August 14, 2019
August 22, 2019
August 28, 2019

Would the study be a good fit for me?
Participants need to have participated in activities at the Senior Center who have internet/email access and a physical mailing address.

How is the study conducted?
This study uses a 62-question electronic survey given at the initial visit and repeated at completion after 6 weeks. Weekly motivational emails and monthly mailed information will be sent over the 6-week study period.

Upon conclusion of the study, participants will be emailed the final results.

To take part in this research study or for more information, please contact:
Suzanne Slovak at (256) 497-2148 or SS0148@uah.edu

The principal researcher for this study is
Suzanne Slovak BSN, RN
Doctoral student at the University of Alabama in Huntsville
Appendix B

Consent Form

The Effect of Education and Motivation for Older Adults Health

You are invited to participate in a research study about the effects of education and motivation on nutrition and exercise as a means to elicit positive behavioral changes in older adults. This study is designed to help us to better understand the effects of education and motivation for older adult’s health. The project leader is Suzanne Slovak BSN, RN, from the University of Alabama in Huntsville, located in Huntsville Alabama.

PROCEDURE TO BE FOLLOWED IN THE STUDY: Participation in this study is completely voluntary. Once written consent is given; you will be asked to complete a 62-question paper survey containing questions regarding your background (10), and an additional fifty-two (52) questions regarding your nutritional habits, exercise frequency/type, and attitudes towards each topic which will take a maximum of ten (10) minutes to complete. This same survey with the addition of three (3) questions will once again be administered at the end of the project; six (6) weeks after the project start. You will be assigned a number for identification during the study and will be referenced by that number instead of your name for the duration of the research study. You will receive weekly motivational emails (8 total) with the subject headline “Mindful Health Email #” and a monthly mailed educational newsletter (2 total) during the 6-week project.

DISCOMFORTS AND RISKS FROM PARTICIPATING IN THIS STUDY:

Potential risks to you by participating in this study include possible emotional and psychological stress that may trigger any negative feelings associated with the experiences that are being discussed. Physical risk is possible if the education provided is disregarded, altered, or your health status cannot compensate. You may withdraw from the study at any time without negative consequences. The possible risks for this study are estimated to be minimal, if any.
EXPECTED BENEFITS: Potential benefits to the participants include the identification of facilitators and barriers to nutrition, exercise, and the beliefs/attitudes felt toward each subject. The results of this project will enable improvements in knowledge, nutritional and fitness behaviors, and the increased ability to apply these concepts into daily self-management activities for increased health outcomes.

This study is important in that it contributes to the scientific knowledge base in the field of nursing and medicine to improve the quality and efficiency of the health care delivery methods for individuals with chronic conditions. Results of this research may help identify areas needed to improve upon in caring for older adult patient population. Please see the section below for incentives and compensation for participation in this study.

INCENTIVES AND COMPENSATION FOR PARTICIPATION: The topic being researched is directly relevant in the daily self-management activities of the individual and can provide insights into improving nutritional knowledge and increasing exercise frequency causing an overall improvement in health status and the potential to decrease medical expenses.

CONFIDENTIALITY OF RESULTS: No names will be used during the study. You will be assigned a number for identification during the study and will be referenced by that number instead of your name for the duration of the research study. Once the study is completed all related study items and paperwork will be shredded and destroyed.

FREEDOM TO WITHDRAW: You are free to withdraw from the study at any time. You will not be penalized because of withdrawal in any form. The Project Leader reserves the right to remove any participant from the project without regard to the participant’s consent.

CONTACT INFORMATION: If you have any questions, please ask them now. If you have questions later on, you may contact the Project Leader, Suzanne Slovak BSN, RN, located in
Huntsville, AL at the University of Alabama in Huntsville. Contact information for Suzanne Slovak: (256) 497-2148 or ss0148@uah.edu. The Doctoral Chair is Dr. Lenora Smith at the University of Alabama in Huntsville. Contact information: (256) 824-2425 or Lenora.Smith@uah.edu. If you have questions about your rights as a research participant, or concerns or complaints about the research, you may contact the Office of the IRB (IRB) at 256-824-6101 or email the IRB chair Dr. Ann Bianchi at irb.@uah.edu. This study was approved by the Institutional Review Board at UAH and will expire in one year from July 16, 2019.

________________________________                             ______________________________
Name (Please Print)                                                         Signature            Date
Appendix C

The UAH Institutional Review Board of Human Subjects Committee has reviewed your proposal titled: *The effect of education and motivation for older adults’ health promotion* and found it meets the necessary criteria for approval. Your proposal seems to be in compliance with these institutions Federal Wide Assurance (FWA) 00019998 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46).

Please note that this approval is good for one year from the date on this letter. If data collection continues past this period, you are responsible for processing a renewal application a minimum of 60 days prior to the expiration date.

No changes are to be made to the approved protocol without prior review and approval from the UAH IRB. All changes (e.g. a change in procedure, number of subjects, personnel, study locations, new recruitment materials, study instruments, etc) must be prospectively reviewed and approved by the IRB before they are implemented. You should report any unanticipated problems involving risks to the participants or others to the IRB Chair.

If you have any questions regarding the IRB’s decision, please contact me.

Sincerely,

Ann L. Bianchi
IRB Chair
Associate Professor, College of Nursing

Date: 16 July 2019

PI: Suzanne Slovak
PI Department: College of Nursing
The University of Alabama in Huntsville

Dear Suzanne,

_X_ Expedited (see pg 2)

__ Exempted (see pg 3)

__ Full Review

__ Extension of Approval
July 2, 2019

To whom it may concern,

I write on behalf of the Huntsville-Madison County Senior Center in support of research by Susan Slovak BSN, RN, a Doctoral student at the University of Alabama in Huntsville investigating the effect of education and motivation for older adult’s health.

Sincerely,

Teresa Crandall
Health Programs Coordinator

“Youth is a gift of nature. Age is a work of art”
Appendix E

Educational Emails (8)

Email #1

“The best preparation for tomorrow is doing your best today.”
- H. Jackson Brown, Jr.

READY….

Raise your standards!
If you sincerely want to make a change in your life, the first thing you will need to do is raise your standards. Change occurs once you alter what you demand from yourself. This can include what you will no longer accept in your life, all the things that you will no longer tolerate in order to aspire to what you want to become.

Change your limiting beliefs!
If you change your personal standards but do not have an internal belief that change is possible you will not achieve your goal. You won’t even attempt to change due to lacking the certainty you are able to dig deep and succeed. Beliefs tell us how things are, what we believe is possible or impossible, and what we can or cannot do. Personal beliefs touch every aspect of our lives shaping our actions, thoughts and feeling we experience. To make a lasting change, we MUST change our belief system!

Change your strategy!
In order to make a lasting change and commitment you need to have the best strategies in place to accomplish your goals. You must find a way to get the job done. This can be accomplished by watching another who has already accomplished what you plan to achieve. Use this person as a role model and tap into their knowledge! Learn their methods and how they think. This will make you more effective and you can modify it to fit your goal. “Lots of people know what to do, but few people actually do what they know.” -Anthony Robbins. Knowing the information is not enough. You must DO IT and take action to achieve your goals.
What are “Pulses,” and are they good for you? Pulses are another name for beans like black beans, kidney, as well as chickpeas and lentils. Pulses comes from the Latin word meaning “thick soup” and is a common term in Europe and Canada.

Beans are an excellent source of nutrition that is sustainable, easy to cook with and easy on your budget. Some easy methods to incorporate beans into your daily diet include pureeing them and using it as a spread on your sandwiches, toss into a salad or they can even be mixed into a brownie mix (use a 15 ounce can of black beans pureed to replace 1 cup of flour in recipe for extra moistness and nutrients).

Frugal tip:
Have a meatless Monday. By using beans alone or with brown rice you can make any number of your favorite dishes meatless. This makes this dish not only healthier, but also is a huge cost savings for your budget.

The waist carver move. This move targets your abdominal section to help create a toned core that helps in your posture, decreases low back pain and prevents injuries. This move is a full-body work out. Not only will it tighten your midsection, but in addition it strengthens your shoulders, biceps, triceps and chest. Your posture will be improved, and your glutes and quadriceps will be toned.

**Waist Carver Move:**

**Step 1:**

Start on floor in a plank position with hands slightly wider than your shoulders, body in a straight line, and elbows sturdy but not locked.

![Waist Carver Move](image)

**Step 2:**

Pull your left knee across your body toward your right shoulder, as shown in the picture. Hold for 3 seconds. Return to start and switch sides, bringing right knee toward left shoulder. Hold another 3 seconds. That is 1 repetition. Do 5 repetitions for a set. Work up to 3 sets, resting 30 seconds between each. Make it harder: hold knee a little longer; aim for 5-8 seconds per side.
OPPORTUNITIES…

The Osher Lifelong Learning Institute (OLLI) is a learning community for adults over the age of 50 at the University of Alabama in Huntsville (UAH). It offers a large selection of available courses that are available both during day and evening hours. Courses are offered in history, science, finance, fitness, leisure, computers, foreign languages and many more. Courses run for 8-weeks in the Fall, 7-weeks for the Winter semester, 6-weeks in the Spring and has summer short courses. There are no tests, grades or mandatory class assignments.

Membership costs $25 for one-year with an additional $99 per term fee for up to 3 courses ($15 for each additional course). More information for this opportunity is available at: https://www.uah.edu/pcs/olli

Email #2

“Don’t worry about failures, worry about the chances you miss when you don’t even try.”

–Jack Canfield

READY…. 

Decisions help shape your destiny. The decisions that you make today will shape how you feel not only today, but who you are going to become in the future. Everything that occurs in our lives stem from a decision that we made. Making a decision requires an action to be taken and followed through with. What kind of results are you pursuing? What can of person are you committed to becoming?

Set a baseline standard. If you do not set a baseline for what you will accept in your life, chances are you will slip into behaviors and attitudes that are below what you deserve or desire. You must stay committed to your decision that allows you to live your life at the highest level.

Use whatever life gives you in the moment. You will be able to accomplish your goals if you 1) clearly decide what you want to achieve, 2) you are willing to DO something and take action,
3) notice what methods are working and what are not, 4) Continuously change your approach until you achieve your goal using what life gives you along the way.

SET....

How can I get the health benefits of wine without the wine? Resveratrol is part of a group of compounds called polyphenols. This compound is thought to act like an antioxidant that protects your body against damage.

Resveratrol helps with:
- Limit the spread of cancer
- Lowers LDL cholesterol
- Decreases the chance of clot formation that can lead to heart attack,
- Helps prevent insulin resistance
- May protect nerve cell damage that leads to Alzheimer’s Disease
- Decreases the risk of heart disease

Resveratrol is found naturally in:
- Blueberries, cranberries
- Cocoa, dark chocolate
- Grapes
- Peanuts, pistachios

GO…

Your body was created to move. You have over 650 named muscles within your body that help your limbs and other body parts to move and stay active. The simplest and no-cost, no-prep way to help your body is to simply walk.

Benefits of Walking:
- Lowered blood pressure
- Strengthened heart
- Improved circulation
- Enhances your mood, reduces stress
- Can lead to weight loss
- Supports your joints
- Boosts your immune function

Did You Know??
- Simply getting up and walking 2 minutes every hour lowers your risk of dying earlier than your sedentary peers by 33%!!!
- A brisk walk will give you a work out that is just as good for your heart as running
- A daily 30-minute walk cuts the risk of Type 2 Diabetes and Colon Cancer

Walking Plan:
Week 1:
Make it a habit: Your goal is to walk every day, aim for 30 minutes at a moderate pace on at least 3 of the days. The other 4 days get walking for 15 minutes. Consistency is more important this week than walking for long periods of time.

Week 2:
Go a little longer: Build your endurance by walking farther this week. On 3 days alternate aim to walk for 45 minutes. The remaining 4 days walk for at least 15 minutes at a brisk pace.

Week 3:
Kick it up a notch: You will burn more calories when you add intervals to your walks. On 3 days alternate between 1-minute of fast walking with 2-minutes of moderately paced walking. You will also do a long walk this week to help build your endurance.
Follow this plan:
Sunday/Tuesday/Thursday: 20-minute interval walk
Monday/Wednesday: 15-30 minutes moderately paced
Saturday: 55 minutes

Week 4:
Putting it together: Intervals, long walks, and a routine. A rest day may be added between the Interval days.
Follow this plan:
Sunday/Tuesday/Thursday: 30-minute interval walk
Monday/Wednesday/Friday: 15-30 minutes moderately paced walk
Saturday: 60-minute endurance walk

OPPORTUNITIES…
Did you know that Publix and Kroger both offer free fulfillment of antibiotics prescribed by your Primary Care Provider (PCP)? Kroger also offers free flu shots each season also.

Email #3

“Believe you can and you’re halfway there.”
-Theodore Roosevelt

READY….

Harness the power of decision by:
Remember the true power of making decisions: Decisions can be made at any moment with the potential to change your entire life. Once made, decisions set in motion a new cause, effect, direction, and objective for your life.

Realize the hardest step in achieving anything is making a true commitment and decision. Make you decision quickly while using discernment. Don’t spend long periods of time worrying about the how or if you can do it. Decisive decision making has been shown they are slow to change their decision, if at all and have had successful outcomes.
Make decisions often.
The more decisions you make, the better you will become at it.

Learn from your decisions.
You will fail sometimes after a decision is reached. The most important thing is what is your take back from it all? What did you learn? What was good or bad about the outcome? This failure can become an asset to you when making future decisions.

Stay committed to your decisions but stay flexible in your approach.
Don’t be rigid in your approach to your goal. Allow for flexibility and the introduction of options into your plan.

SET….

The Sugar Rush!
On average women consume 15 teaspoons a day, while men take in an average of 20 teaspoons. According to the World Health Organization (WHO) and the American Heart Association (AHA) it is recommended that our daily totals for sugar intake should be under 6 teaspoons. Too much sugar can change the brain similar to what is seen with cocaine or heroin. Over time we become desensitized to the feel-good effects and require larger amounts to get the same satisfaction making us truly addicted to this sweet substance.

Some Sugar Math:
1 teaspoon (4 grams) of sugar = 16 calories
Daily intake should be LESS than: 25 grams or 100 calories
Average adult intake 12.5 teaspoons (50 grams) or 200 calories

The Sugar Rush…to be continued next week.

GO…

Shake those hips! The hip joint is a ball-and-socket type joint that is formed where the thigh bone (femur) meets the pelvis. The hips support the weight of the body and is responsible for the movements of the upper legs. The hip allows for a large range of motion for daily activities like walking, squatting and climbing stairs and is one of the body’s most mobile joints. 75% of hip fractures occur in women due to the higher risk of osteoporosis, but exercise lessens this risk.

Research has shown increasing your calcium intake through diet or supplements alone do not help prevent hip fractures. Falls are the cause of most hip fractures, so simple exercises to encourage balance training help prevent fractures from happening.

The Balance Test:
Test #1: Stand still with feet lined up heel to toe
Test #2: Stand on one leg, raising the other foot so it hovers a few inches off the floor
Test #3: Hold the position in Test #2, then close your eyes.

For each test, how easy was it for you to stay upright for at least 10 seconds?
Simple! You didn’t sway or touch the foot to the floor. Your balance level = Great
Fairly easy: You may have wobbled slightly. Your balance level = Normal
A little tricky: You needed occasional support like a countertop to balance. Your balance level = OK
Difficult: You couldn’t maintain a pose, even with support. Your balance level = Poor

Some Balance Moves:
- Pillow Stance: Stand with both feet in the center of a pillow, hands on hips. Lift right leg up to hip height with knee bent at 90 degrees. Hold position as long as you can without lowering the leg. Switch legs and repeat movement. Repeat twice on each leg. Tip: Focus on a spot a few feet ahead of you to help with stabilizing.
- Semicircle Sweeps: Stand on left leg with hands on hips, extend right leg out in front of you at the 12 o’clock position. Keeping leg straight, sweep foot around in a semicircle to the 6 o’clock position then return to the 12 o’clock position. Repeat 10 times; switch legs.

Do-Anywhere Balance Boosters:
- Stand on one foot while brushing your teeth
- Walk heel to toe for 20 steps when grabbing the mail or heading to your car
- Stand on your tiptoes while washing the dishes or blow-drying your hair

OPPORTUNITIES...

Studio 60 is a supervised facility for seniors over the age of 60. The facility offers treadmills, elliptical trainers, weight machines, free weights plus more. This center also has a trained monitor to help with the exercise machines plus a Fitness Coordinator that can help you design a personalized exercise program. This center also has classes for Balance and Flexibility, Yoga, Tai Chi, Zumba, Pilates and Arthritis exercise classes. Additionally, classes are offered in foreign language, sewing, woodworking and pottery amongst many others.

Studio 60 is located at the Huntsville-Madison County Senior Center 2200 Drake Ave. SW Huntsville, AL 35805. Hours of operation are Monday-Thursday 7:30am-4:30pm, Friday 7:30am-12pm.
To join: Registration fee is $10. Other forms and information can be found at:
http://www.seniorview.com/studio60
Email #4

“Don’t let what you cannot do interfere with what you can do.”

~John Wooden

READY….

The force that shapes your life:
Humans are not random creatures doing things without a reason or purpose. Although we may not be aware of the reason, consciously there is still a driving force behind our behavior.

“All things you and I do, we do either out of our need to avoid pain or our desire to gain pleasure.” Anthony Robbins.

Do we not procrastinate on doing something when we associate pain with the situation? What about when we do not exercise or eat right? Do we not link that with a painful thought such as: it takes too much time, I am too tired to exercise, or I cannot afford healthy food and can only buy processed food? We become comfortable with the pain we are used to (unhealthy food, a tired body) in order to shy away from something, we think will be a more intolerable pain (a new exercise routine, different eating style).

Condition your mind:
By linking intense pain to our current situation, we cause our mind, body, and emotions to instantly change our behavior and seek out what gives it pleasure. Actual pleasure is not what drives us, but the sense of security, the belief we attach to it that causes us to take a certain step or action towards change.

What does it REALLY cost you?
Finally, we need to evaluate what it will mean if you make no changes and remain where you are at now. For example, what would happen if you didn’t improve your dietary choices? Or did not ever exercise or increase your current fitness levels? Be honest with yourself, what will it really cost you over the next month, year, 5 years…?

SET….

The Sugar Rush:
Let’s consider how sugar reacts in your body with this scenario. You decided to “live a little” and ate two warm and sinfully yummy Krispy Kreme doughnuts…

Your body’s reaction:
- To get it out of the bloodstream, your pancreas cranks up the insulin production
- Insulin delivers the sugar to the cells, which decide to hoard it away for a “rainy day”
- Now your brain can’t find the needed sugar in the blood and tells you to eat something sweet NOW!
- You feel ok for a bit, but then the cycle begins once again.
- If you reduced your sugar intake to a trickle, the cycle is broken.
Experts say burning 300 calories a day is the number that will get the scale tipping in the right direction and the weight to start coming off. Here are some fun and different ways to burn those calories!

#1 Skip through the commercials! During your hour-long show, during commercial breaks jump rope to help burn those calories! No rope? Ghost jump; use your imagination and mimic the movement.

#2 Turn up the music and get cleaning! Squat as you pick up things on the floor, work up a sweat scrubbing the bath tub and use your whole body to push the sweeper. You will hit your 300 calories within 1 hour of cleaning.

#3 Play Chef: 80 minutes of cooking and you could have your meal prep and dinners done for the next 7 nights and your calories burned!

#4 Knock a few back! Work out at the bowling alley by playing a few games for 90 minutes. Not only will it burn your calories, but it will help build muscle and flexibility from using the bowling ball.

#5 7-Minute Workout x 2: Do a muscle-strengthening circuit (do it twice) gives your metabolism a healthy push that helps you burn your calories and continue to effectively burn calories even when done as your body rebuilds the muscle fibers. Download one of several 7-minute workout apps to use or you can use YouTube or Google it for additional options.

#6 SHOP! Just 90 minutes of actively perusing the store, trying on clothes and walking the aisles will burn your 300 calories as fast as the salesclerk can swipe your credit card!

#7 Time Crunch: Getting just 5 minutes of exercise an hour helps to boost your brain power and burn extra calories. So, get up and walk those stairs!

#8 Be a Pedal Pusher! A 30-minute bike ride with minimal stops will help you burn calories easily while getting some outdoor time. Riding is easier on your joints and a 2015 study found that older adults who biked regularly did just as well as younger people on dexterity (agility) tests!

#9 Bust a Groove! Turn up your favorite music and getting dancing! Dancing for 45 minutes helps to drop the calories and creates a fun time.

#10 Change it up. Just by rearranging furniture and lugging out some old junk for 45 minutes not only creates enough burn to torch off 300 calories but gives you a new look to your room.

-Adapted from Dr. Oz “The Good Life”
OPPORTUNITIES...

Interested in a free outdoor concert this summer? Big Spring International Park in downtown Huntsville offers “Concerts in the Park” for free. The concerts take place on Mondays 6:30-8pm from June-August. Madison also has this opportunity called “Madison Gazebo Concerts” that occur Thursdays 6:30-8:30pm from May-July.

Not interested in a concert? Big Spring International Park in Huntsville also hosts “Movies in the Park” that are also free. This event occurs the 2nd Friday, June-August.

For further information about area events in Huntsville look at: https://www.huntsville.org/

Email #5

“Be someone’s strength. Be someone’s inspiration.
Be someone’s reason to NEVER give up.”

~Anonymous

READY....

Beliefs have the power to create or the power to destroy.
The vast majority of our beliefs are generalizations formed from past experiences. Our generalizations are based off of interpretations of it being painful or pleasurable. Beliefs can be treated as if they are written in stone and nonchanging when in fact they are not.

Beliefs are
1) usually unconsciously made
2) usually based on a misinterpretation of past experiences
3) once adopted, we forget it is only an interpretation of the event

“If you develop the absolute sense of certainty that powerful beliefs provide, then you can get yourself to accomplish virtually anything, including those things that other people are certain are impossible.” -Anthony Robbins

SET....

The Sugar Rush:
Sugar causes your pancreas to increase its insulin production and becomes overwhelmed stops producing insulin causing Diabetes. Sugar also causes you to gain weight around your midsection the most dangerous area for fat to reside. Your blood vessels are damaged when there is too much sugar in your bloodstream; sugar acts like shards of glass damaging your vessels continuously putting you at risk for a heart attack or stroke. Your teeth start to decay due to the sugar breaking down your enamel. Sugar causes your heart to work harder and your blood pressure and triglycerides to be elevated. Eating 25% more than the recommended sugar amount (100 calories or 25g daily) triples your risk of dying from heart disease! Sugar is linked to depression causing further suppression of a hormone in people that are already at risk.
Kick-Sugar-to-the-Curb Plan:

Step 1: Control cravings with delicious food. Fat + Protein = feel full and stable blood sugar (no sugar cravings)

Step 2: Eat better snacks. Have at least 2 snacks a day. Avoid refined flours (pretzels, crackers) since your body handles it the same as it does with sugar. Try these: mixed nuts & a few semisweet chocolate chips, or plain yogurt with cinnamon, pecans, and berries

Step 3: Watch out for sneaky sugar! Read food labels for added sugar that is snuck into your food. First look at the label for the grams of sugar in the item. Beware! Look for these names: high-fructose corn syrup, honey, fructose, raw sugar, molasses, dextrose, glucose, fruit juice concentrate, malt sugar, maltose, lactose, sucrose, any kind of syrup. ALL of these add sugar to your daily intake!

GO...

Our Magnificent Muscles:

650: Number of muscles in your body
35% Average amount of your weight that is made up of muscle
7: Number of calories per hour that a pound of muscle burns. A pound of fat burns only 2 per hour.

Largest muscle: You are sitting on it…the gluteus maximus.

Muscle memory: Your muscles memorize and store your movements in your spinal cord. That is why we never forget how to ride a bike!

It takes a village: You cannot spot-train your abdomen to have washboard abs! Focusing on a single muscle group will make it stronger but will not magically burn off the fat layer on top of it. Basically, you will have toned abs that are protected by a layer of fat! Want to change your shape? You need to build more muscle everywhere! This helps to burn more calories all day long which melts the fat. Do exercises that work multiple muscle groups such as squats and push-ups. Not ready for push-ups yet? Modify the move by using a wall to master the push-up first.

Torn down but stronger: When you push your muscles to do something new, they have a habit of getting sore. Soreness is due to a form of strain because your muscles are not used to working smoothly together yet. Little tears in the muscle fiber leads to inflammation and the soreness that you feel. The good news is this will cause your muscles to become stronger while repairing themselves.

Staying power: Think that losing muscle mass is something that cannot be stopped as we age? Think again. Studies have shown that MRI images of a 40-year-old athlete when compared to a 70-year-old athlete both were identically lean and healthy! Both of these age groups did exercise such as biking, swimming, or running. 4-5 days a week for at least 150 minutes with 2 of those days reserved for strength training.
3 Amazing Things Your Muscles Do:

They mop up blood fats:
Muscles have special enzymes that break down the unhealthy fats (triglycerides) in your blood so they do not damage your blood vessels. Being sedentary decreases the enzyme activity by 90%!! Take a break from sitting at least every 30 minutes and move around.

They make you happy:
Did you know that your brain and muscles are the best of friends? Your brain tells your muscles to get moving and when they do your brain is happy. With this movement the brain reacts by raising the amount of brain cells and increase your feel-good chemicals! This is why after you exercise you feel so cheerful and that you can conquer the world!

They help control blood sugar:
Your muscles need glucose (blood sugar) all the time, this is especially true when you are moving around and exercising. Studies have shown that strength training help to keep your blood sugar levels steady in people that have diabetes.

OPPORTUNITIES…
Have you checked out your local library for free events that are offered? Local libraries host free lecture series, classes, and have clubs such as chess, cards, and painting. Look into your area libraries for these events and enjoy!

Email #6
“The secret of change is to focus ALL of your energy not on fighting the old, but on building the new.”
—Socrates

READY….

What do you want?
Ask yourself, what do you truly want in life. Does it involve a happy marriage, money, respect, good health? Whatever you desire in your life the question “Why do I want these things” need to occur. When we examine our reasons, often they are sought after as a means to achieving a certain feeling or emotional state that are created by these things versus the actual goal stated.

What is your state of mind?
The state of mind you are in can help you be resourceful and perceptive, or it can create a mental fog by being led by disempowering states. Your behavior is not due to your ability level, but rather, your current state of mind. The state of mind you are in determines how you will perceive the situation and how you will behave and the decisions you will make.
Get determined.
You can change your focus in life just by changing what you choose to focus on. Select your goal, decide on the path, and focus. If you are constantly focusing on all the bad things that could occur to your plan and not on the positive and empowering things, then you are setting yourself up for failure, or worse not even trying. You need to be in a determined state of mind in order to succeed at your goals.

-Adapted from Anthony Robbins “Awaken the Giant Within”

SET….

Go ahead, eat (the right) fat!
Yes, fat can be good for you if you consume the correct form of it. Unsaturated fats (monounsaturated, polyunsaturated) are a heart-healthy choice that help you curb your carbohydrate and sugary food cravings. Between 25-35% of your daily calories can come from heart-healthy fats. Unsaturated fats are found in avocados, fatty fish (salmon, trout, anchovies), olive oil, nuts, seeds, and peanut butter.

Oh! The benefits…
- May reduce your risk for heart disease by 42%
- Lowers your LDL cholesterol levels
- Helps you lose weight
- Improves your mood
- Strengthens your bones
- May reduce your cancer risks

GO…

Walk Strong at Home!
Don’t want to go outside to walk? You can still get fit while in your home, so no excuses! Give these workouts a try and feel the difference.

Work out #1

Warm up:
Walk up and down 10-15 stairs at a moderate pace three times. No stairs? Walk in place for 6 minutes.

Main workout:
1) Do 10 repetitions of one of the exercises below. 2) Next, walk up and down the stairs 3 times or walk in place. 3) Do 10 repetitions of another exercise, 4) do the stairs 3 times again or walk in place 5) alternate using the stairs (walking in place) and exercises below until you have done all 6 of the moves.

Exercises:
Modified push-up using a counter  Modified jumping jacks  Squats

Bicycle ab crunches  Modified ab crunches  Lunges

OPPORTUNITIES...
Have you heard about the Alabama Weatherization Assistance Program? It is a program designed to save energy and help those that have a qualifying income. This program helps to reduce your home heating and cooling bills. Weatherization includes installing insulation, replacing or repairing windows and doors, sealing air leaks, and patching small areas of your roof or underskirting. To see if you qualify for this service please check out: https://www.benefits.gov/benefit/1841
Email #7

“Don’t count the days,
make the days count.”

—Muhammad Ali

READY…

Questions are the Answer.
Our questions help determine what we think about and focus on in our daily lives. Events that have occurred in our lives do NOT determine how we feel and act, but rather, our interpretation of our experiences do. The meaning that you attach to an event will determine the decisions and actions that you take. Asking yourself questions help to tear down walls of limitations and doubts and encourages us to make progress towards our goals.

How questions work.
The correct question allows us to accomplish these things:

• They immediately change what we’re focused on and how we feel
• They change what we delete in our minds depending on what our focus is. This can include feelings of joy, happiness, and contentment when we focus on feelings of sadness.
• They change the resources available to us and how we respond in less than ideal situations and what we are willing to do to achieve our dreams.

SET…

What we eat can help our skin age well or cause premature aging of this vital tissue. Conscience dietary habits can help our skin remain healthy and our bodies performing at top capacity.

Anti-Aging Nutrition:

Load up on produce. Fruits and vegetables are packed with antioxidant-rich nutrients which can decrease skin cancer risks by 54%!

Get your protein. Protein helps to pump your body full of collagen-building amino acids giving your skin, hair, and nails added strength. 46 grams of protein are recommended daily.

Heal your stomach. Rebalancing your body with foods rich in probiotics like yogurt and fermented tea help keep your skin clear and healthy.

Hold the hormones. Growth hormones can increase oil production and inflammation. Read your dairy labels to make sure it came from animals not treated with growth hormones.

Dial back the sugar and refined carbs. Excess amounts cause the body to increase oil production and inflammation which can cause flares in eczema, rosacea, and stiffen collagen fibers making the skin less springy

Choose healthy fats. Omega-3 fatty acids found in salmon, tuna, and sardines help decrease the signs of skin damage from the sun and keeps the skin supple and glowing.
GO...

Resistance training is an excellent way to keep your muscles in shape and encourage the retention of muscle mass as we age. The loss of muscle mass causes our metabolism to slow down making weight loss difficult to achieve.

This workout hits your entire body and uses multiple joint exercises that helps build muscle. By using resistance training you will help balance out the entire body while increasing your muscle mass.

**The Fit-Tastic 3:**

**Dumbbell Shadowboxing:**  
**Muscles targeted:** shoulders, pectorals, triceps

**Setup:** Hold a pair of light dumbbells and assume a boxing stance with one foot forward, one foot back, knees slightly bent, staying light on your feet. Bring your hands up in front of your chest, arms bent, in a typical boxer pose.

**Move:** Punch continuously out in front of you, alternating arms. Maintain a rapid pace and throw punches with purpose.

**Repetitions:** 3 sets of 8-10 reps per arm

**Goblet Squat:**  
**Muscles targeted:** Quadriceps, glutes, hamstrings

**Setup:** Stand with your feet shoulder-width apart, toes and knees pointed slightly outward. Grasp dumbbell with both hands and hold it just beneath your chin against your chest, elbows bent and tucked into your sides.

**Move:** Keeping your weight over your heels and your shoulders back, drop your glutes toward the floor as if sitting down on a stool. When your quads come parallel with the floor or slightly lower, press back up through the heels to return to standing.

**Repetitions:** 4 sets of 6-12 reps

**Weighted Walking Lunge:**  
**Muscles targeted:** Quadriceps, glutes, hamstrings, calves

**Setup:** Start in standing position with legs together, holding light weights in both hands.

**Move:** Step forward with left leg, bend knees, dropping the back one straight down until it nearly touches the floor or as low as you can go, lift up and walk the right leg forward while going into the lunge position.
Repetitions: 3 sets of 20 lunges (10 per leg)

OPPORTUNITIES…

The Senior Farmer’s Market Nutrition Program (FMNP) is a program that helps provide fresh, nutritious, and locally-grown fruit, vegetables, honey, and herbs from farmer’s markets and roadside stands to its recipients. Coupons are provided to those that qualify. For more information please look at: http://www.fma.alabama.gov/

Email #8

“The scariest moment is always just before you start.”

–Stephen King

READY….

Emotions of Power:
Emotions can be a powerful driving force in our lives. They have the ability to empower us or tear us down, to help us achieve greatness or fail. If you can harness the power of emotions and focus on what you want to feel each day, you will hold yourself to a higher standard of greatness. These emotions allow you to achieve your highest potential and strive to be the best version of yourself.

Love and Warmth: Consistent expressions of love has the ability to make almost any negative emotion decrease.

Curiosity: Be as curious as a child. Cure your boredom by replacing it with a sense of curiosity. If you are curious, nothing is seen as a chore but as chance to learn and grow.

Excitement and Passion: This emotion adds spice to your life. It has the ability to change any challenge into an opportunity! “Passion is unbridled power to move our lives forward at a faster tempo than ever before.”

Determination: This emotion is mandatory for dealing with daily upsets or challenges, disappointments and disillusionments. Having determination will allow you to achieve your decision you have committed to and accomplish any goal you focus on.

Confidence: This emotion creates a sense of certainty through the power of faith. When you have this emotion, you are willing to experiment and stretch yourself to try new and more challenging things.

-Adapted from Anthony Robbins “Awaken the Giant Within”
Tiny Powerhouses: Berries have the distinction of being classified as a “superfood” due to their antioxidant properties. Studies have shown that this superfood has improved memory and cognitive functions, reduces inflammation and arthritic pain, lowers LDL cholesterol and helps fight cancer! These powerhouses also do wonders for your heart. An 18-year study showed that berries lowered your risk of heart attack by 32% when you have 3 or more servings a week.

Shrinking Waistlines: Despite their sweetness, berries will not wreck your waistline. Research has shown that including berries in your diet actually reduces your waistline and lowers your body’s fat percentage.

GO...

Changes are a coming!
As you age you may experience changes to your cardiovascular system, like a lower heart rate or an increase in blood pressure. Your bone density may become an issue due to decreases seen and maintaining muscle strength may prove a more difficult challenge than it once did.

Fire up that metabolism!
The good news is that there is almost no health issue that isn’t improved or addressed with physical activity, healthy eating and stress management! Keep your metabolism revved by eating cinnamon which helps the body use the glucose or sugar in your blood instead of storing it. Hot pepper intake will help increase the level of fat burn for your body. Finally, ginger allows for more calories to be burned by increasing your muscles’ oxygen consumption while boosting the amount of fat released from fat stores to be burned as your body’s fuel.

It’s all about tone!
Tightening up areas will help your posture, keep your metabolism revving, and keep your muscles in shape. Strength training exercises give you more “bang for your buck” than doing just cardio specific exercises. Weight bearing exercises not only burns calories while you are doing the actual exercise but continues to burn calories for the remainder of the day due to the muscle repair and growth that occurs! Cardo exercises only burn calories for the time that you are moving.

Target areas to hit:

Back of the arms:
Tone your triceps while engaging your core with diamond push-ups. Place your hands on the floor, with your index fingers and thumbs touching, and perform up to 3 sets of 10 push-ups. Modify this move by performing move on your knees or using the counter or wall option.

Muffin top:
Stand with your feet hip width apart, toes turned out slightly, and hands clasped behind your head. Lower into a squat and, as you stand, lift your right knee up and out to the side, bending at
the waist to reach your right elbow to your right knee. Lower back into a squat and repeat on your left side. That’s one repetition. Perform 3 sets of 10 reps.

**Butt/Thighs:**
Use the bridge move to tone your glutes and hamstrings.
Lie face up on a smooth surface, with knees bent and each foot on the ground. Lift your hips to bring them in line with your shoulders, flex your quadriceps and glutes to keep your hips steady. Hold for 5 seconds then lower your hips to the floor. Perform 3 sets of 5 reps.

**opportunities…**
The Madison City Farmer’s Market is located at 1088 Hughes Road, Madison, Alabama at the Trinity Baptist Church.

At this market there are many things to see including handmade cards, soaps, lotions, candles, wood crafts, handsewn items and other homemade items. There are homegrown vegetables, fruit, baked goods, cheese, and honey available for sale also.

The market is open Saturdays in April-September from 8am-12pm. More information on this opportunity can be found at: [http://www.madisoncityfarmersmarket.com/index.html](http://www.madisoncityfarmersmarket.com/index.html)
Appendix F

Tri-Fold Quick Reference Tools (2)

Quick Reference Tri-Fold Guide #1

Arthritis

What is it?

Chronic condition caused by the deterioration of joint cartilage leaving narrowed joint spaces and the bones unprotected. Known as the “wear and tear” disease mainly affecting weight-bearing joints such as the knees, hips and hands. It can be caused by repeated joint stress, endocrine disorders and side effects from medications.

Now What?

Medications such as Tylenol can relieve the pain initially. NSAIDs and steroid injections within the joint can also be used. Surgery may be necessary.

What Can I Do?

Eat a balanced diet for weight loss to reduce stress on joint. Stay active with low-impact exercises and resistance training balanced with rest. Stabilize the joint with a brace and use hot packs for pain/stiffness, cold packs for swelling.

Diabetes Type 2

What is it?

Metabolic disorder characterized by high levels of blood glucose due to impaired insulin production, inappropriate glucose production and insulin insensitivity. It is a chronic condition that affects the way the body processes blood sugar.

Now What?

Initially, diet and exercise can help with the symptoms. Medications taken by mouth help stimulate the production of insulin, increase the body’s sensitivity to insulin or to decrease the production of glucose. Injectable insulin may also be used along with oral medications or alone for further control.
What Can I Do?

Meal plans to meet nutritional needs, control blood glucose and cholesterol levels and reach appropriate body weight with diet and exercise.

Reference

Chronic Disease
Quick Reference Tool
Hypertension

What is it?

Condition in which the force of blood against the artery walls is too high. The pressure is determined by the work of the heart and resistance within the vessels. Causes include smoking, obesity, sedentary lifestyle, high-salt diet, alcohol, stress, aging and family traits. Can lead to stroke, heart attack, heart failure and kidney failure amongst others.

Now What?

Best regulated through diet, weight loss and exercise initially. Medications that are used include diuretics (water pills) and blood pressure regulating pills. Pills are started at the lowest dose and one at a time. A combination of at least two medications to control blood pressure is usually necessary.

What Can I Do?

Reduction of stress. Discontinue smoking and alcohol. Engage in 30 minutes of moderate-intensity aerobic exercise 5-7 days a week. Weight loss reduce salt intake (under 5g/day), dietary changes.

High Cholesterol

What is it?

High amounts of cholesterol in the blood. Waxy substance that in excess amounts occlude blood vessels from the accumulated plaque. Occluded vessels increase blood pressure, decrease oxygen to heart and organs. Can cause coronary artery disease, stroke and heart attack. Can be inherited, but often due to unhealthy lifestyle choices.

Now What?

Blood tests are done to check cholesterol levels. The use of lipid-lowering medications (statins) along with changes in diet and exercise. Use of Omega-3 fatty acid supplements with doctor approval for high triglyceride levels.

What Can I Do?

Lifestyle changes including weight reduction, stop smoking, avoid alcohol, decreased saturated fat intake and exercise.
Heart Disease

What is it?

Heart conditions that involve diseased blood vessels, structural heart problems, and blood clots. Includes coronary artery disease, heart valve disease, congestive heart failure, abnormal heart rhythms and peripheral artery disease. Most common cause; atherosclerosis or buildup of fatty plaque in the arteries causing decreased blood flow. Other causes; high blood pressure, poor diet, obesity, sedentary lifestyle, diabetes, stress, high cholesterol levels, smoking and hereditary. Can cause heart failure, heart attack, stroke and sudden cardiac arrest.

Now What?

ECG to record your heart electrical signals, stress test. Medications to control heart disease depending on type. Possible surgery.

What Can I Do?

Quit smoking, control blood pressure, high cholesterol and diabetes. Exercise at least 30 minutes/day 5-7 days a week. Eat a diet low in salt (under 5g/day) and saturated fats. Reduce stress.

Quick Reference Tri-Fold Guide #2

Protein

Purpose:
Helps to maintain, develop and repair muscle mass. Required for the structure, function and regulation of the body’s tissues and organs. Found in meat, poultry, seafood, dairy and nuts.

Benefits:
Helps to keep muscles strong. Aging bodies require higher levels of protein due to lack of body responsiveness. Approximately 15-25% of total daily caloric intake should come from proteins. 0.8 grams of protein for every 2.2 pounds is the daily recommended amount. Example: 150 pounds (who does not exercise) requires 55 grams of protein/day. 150 pounds/ 2.2= 68.18. 68.18 x 0.8 = 54.5 grams.

Sources:
Beans and Legumes
Fish and seafood
Skinless, white-meat poultry
Eggs
Greek yogurt
Low-fat dairy
Protein shakes
Nuts and seeds

Vitamin B₁₂

Purpose:
Essential nutrient that the body cannot make on its own. Necessary for keeping nerves healthy and supports the production of DNA and red blood cells. Maintains normal brain function. Found in animal products especially meat and dairy.

Benefits:
May improve mood and symptoms of depression. Provides energy and decreases loss of neurons in brain. Supports bone health and potentially decreases osteoporosis. Potential for improved heart health.

Sources:
Animal liver
Clams
Sardines
Beef
Tuna
Trout, Salmon
Milk and dairy products
Eggs
Fortified cereals/bread
Nutritional Needs
Quick Reference Tool

Iron

**Purpose:**
Essential mineral for blood production. 70% of the body’s iron is found in the hemoglobin within red blood cells. Hemoglobin is essential for transferring oxygen in blood to the tissues. Found in red meats, fish and poultry.

**Benefits:**
It improves function and overall brain health. Enhances muscle contraction, elasticity and tone. It treats anemia due to low production of red blood cells. It boosts the
immune system. Improves symptoms of fatigue. Speeds up metabolism which aids in weight loss.

**Sources:**
Beans and lentils
Tofu
Baked potatoes
Cashews
Dark leafy vegetables
Fortified cereals
Whole-grain and enriched bread
Pumpkin seeds
Dried fruit; apricots, raisins, prunes
Chicken, turkey
Tuna, trout, oysters, crab, shrimp
Blueberries

**Calcium/Vitamin D**

**Purpose:**
Work together to protect the bones. Calcium helps to build and maintain the bones, needed for the heart, muscles, blood clotting and nerve function. Vitamin D helps the body to effectively absorb the calcium and regulates the immune system. Calcium is found in dairy products, green leafy vegetables and soft-boned fish. Vitamin D comes from the sunlight, supplements and fatty fish.

**Benefits:**
Vitamin D fights diseases such as heart disease, multiple sclerosis and the flu. It also reduces symptoms of depression. Weight loss occurs with calcium and vitamin D due to reduced appetite. Calcium reduces risk of colon cancer and kidney stones.

**Sources:**
Milk and dairy sources
Nuts
Bone-in salmon, sardines
Green leafy vegetables
Orange juice
Cereals
Soy
Almonds
Fiber

**Purpose:**
Promotes the movement of material through digestive tract and increases stool bulk. Found in legumes, whole grains, and vegetables.

**Benefits:**
Helps decrease constipation. High-fiber diet reduces cholesterol that is absorbed into the bloodstream. Decreases and evens out the rate of sugar entering the bloodstream and maintains control. High-fiber diets slow digestion helping the feeling of fullness and achieve weight loss.

**Sources:**
Legumes; black beans, lentils, chickpeas
Nuts and seeds
Brown or wild rice
Fruits; banana, orange, berries, apple
Green leafy vegetables
Whole-grain bread
Oatmeal, bran flakes

Retrieved from:
Health.harvard.edu
Healthline.com
AARP.com
Medlineplus.gov
NIH.gov
High blood pressure or hypertension is a condition where the force of the blood within the artery is too high. Over 85 million people in the United States or every 1 in 3 adults have high blood pressure. The American Heart Association guidelines define hypertension as blood pressure greater than 130/80.

Risk factors that increase the chances of having hypertension include:
- Age; more common in individuals over 60
- Sedentary lifestyle
- Poor nutrition
- Ethnicity
- Size and weight; obesity is a key risk factor
- Alcohol and Tobacco use
- Sex; lifetime risk is the same for both sexes, but men are prone to hypertension at earlier ages
- Existing health conditions; Diabetes, chronic kidney disease, high cholesterol, cardiovascular disease.
Complications:
- Stroke
- Heart Attack
- Heart Failure

Blood pressure is best regulated through your daily diet and lifestyle adjustments which are considered the first-line treatment. Regular moderate-intensity aerobic exercise for 30 minutes, 5-7 days a week is recommended. Also, reducing stress, alcohol and quitting smoking will help control blood pressure.

When blood pressure is higher than 130/80 medications are used in addition to the lifestyle changes already in place. The medication is started at the lowest dose to judge its effectiveness. Medication choices by your provider take in consideration any other medical conditions that you may have. A combination of at least two antihypertensive medications are often required for sufficient control.

Medications used to help lower blood pressure:
- Diuretics
- Beta-blockers
- Calcium-channel blockers
- Angiotensin-converting enzyme (ACE) inhibitors
- Angiotensin receptor blockers (ARBs)

Don’t eat LESS, eat BETTER…

A diet that is rich in potassium, magnesium, and fiber along with decreased sodium intake can help control blood pressure.

When shopping, focus on items that are on the outer edge or perimeter of the store only. The middle aisles focus on pre-packaged food, frozen meals, and sweets which are not only unhealthy, but spend a large portion of the food budget towards items without any nutritional value.

Healthy eating does not have to be more expensive than other options. Through meal planning, shopping store perimeters and education most healthy foods can be cost effective and easy to prepare.

The healthiest diet cost an average of $1.50 more per day versus the least healthy diets according to the Harvard School of Public Health. This price difference is very small in comparison to the economic costs of diet-related chronic diseases which could see significant reductions in out-of-pocket costs (doctor visits, medications) with a healthy diet.
Foods the Lower Blood Pressure

- Leafy greens: romaine lettuce, kale, spinach etc.
- Berries: blueberries, raspberries, strawberries
- Red Beets
- Skim milk and Yogurt
- Oatmeal
- Bananas
- Salmon, Mackerel, and fish with Omega-3s
- Seeds: unsalted sunflower, pumpkin, squash
- Garlic and Herbs: basil, cinnamon, thyme, rosemary
- Dark Chocolate; greater than 60% cocoa, 100 grams/day
- Pistachios
- Olive Oil

Recipe

Roasted Salmon with Maple Glaze
Servings: 6

¼ cup maple syrup (sugar free if Diabetic)
1 garlic clove, minced
¼ cup balsamic vinegar
2 pounds salmon, cut into 6 filets
¼ teaspoon kosher or sea salt
1/8 teaspoon black pepper

Directions
Preheat oven to 450 F. Lightly coat baking pan with cooking spray.
In a small saucepan, combine maple syrup, garlic and balsamic vinegar over low heat. Heat until just hot and remove from heat. Pour half into a small bowl to use for basting and reserve remainder for later.
Pat salmon dry. Place skin-side down on baking sheet. Brush with maple syrup basting mixture. Bake for 10 minutes, brush again with mixture. Bake another 5 minutes. Continue to baste and bake until fish flakes easily, about 20-25 minutes total.
Transfer salmon to plates and sprinkle with salt and black pepper and top with reserved maple syrup mixture. Serve immediately.

Nutritional Analysis
Serving 1 fillet

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<tr>
<td>Trans Fat: 0g</td>
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</table>

**Be the Best Version of YOU…**

Exercise has the ability to help lower high blood pressure when done on a consistent basis. It also has the benefit of providing you with more energy, reduces stress and makes you feel better overall.

If you are not already active now, verification from your doctor will help you get started on your fitness goals. In order to be more fit, a gym membership is not required, nor is a complicated exercise routine. For benefits to be seen, 30 minutes of daily exercise at least 5-7 days a week will be needed.

What type of exercise is the best? During your exercise routine you need to be breathing a little harder than at rest and your heart will beat slightly faster. There are three types of exercise that can help:

- **Cardiovascular or Aerobic**: helps to lower your blood pressure and makes your heart stronger. Examples: walking, jogging, bicycling (stationary or outdoor), low-impact aerobics, swimming and water aerobics.
- **Strength Training**: helps you burns more calories while building strong muscles. This is also a great method for helping your joints and bones. Examples: free weights, elastic band training
- **Stretching**: helps you become more flexible, allows for better movement and helps prevent against injuries. Examples: Yoga, Pilates
Fitness Options

DVDs...

YouTube...

Join us for a workout anytime on

YouTube

(We work out at home too!)
What is a Belief?

Most people when they consider what a belief is treat it as a real and tangible thing, when in reality it is not. A belief in actuality is a feeling of certainty. We all have the ability to gain the answers to virtually anything, but oftentimes don’t due to our lack of belief or certainty that causes us to not use our resources within ourselves.

Beliefs have the capacity to make us sick or make us healthy in a moment. It has been documented that beliefs affect our immune systems. Further, beliefs can give us the resolve to take action, or conversely weaken and destroy our drive.
Beliefs that we value can create limitations or strengthen us. How we see ourselves is shaped by our beliefs. I am…. successful…. I am…healthy…. I am…forgetful, I am…. fill in the blank. Are your beliefs empowering or do they weaken you?

Unfortunately, limiting beliefs about who we are and our capabilities as an individual can be reinforced in our minds due to past failures. Out of fear of pain or the potential for additional failures, beliefs are developed that create hesitation or to not try at all. This causes limited results and the failure to meet our goals we set for ourselves.

How we deal with adversity and challenges are the most important qualities due to them shaping our lives more than anything else. All personal breakthroughs occur when we experience a change in our belief patterns. Question why you believe the way you do, take action to change the belief if it is not empowering you.

Ask Yourself…

- How is this belief ridiculous?
- Where did I learn this belief and was it worth modeling?
- What will this belief cost me emotionally if I don’t let go of it?
- What will it ultimately cost my relationships if I don’t let go of this belief?
- What will it cost me physically if I don’t let go of this disempowering belief?
- What will it cost me financially?
- What will it cost my family and loved ones if I don’t let this belief go?
One out of every three adults have high cholesterol levels. Cholesterol is a waxy substance that is found in your blood. When there are high amounts of cholesterol you can develop fat deposits within your blood vessels. Over time, these deposits increase in size making blood flow difficult. Another complication can occur if the fatty deposits break away and form a clot leading to a heart attack or stroke.

Cholesterol is naturally produced in your body by your liver. The liver makes all the cholesterol that is required for your body to protect nerves, allows for the production of vitamin D, of cell tissues and certain hormones. Additional cholesterol comes directly from the foods we eat including eggs, red meat and full-fat dairy products.

Risk factors for developing high cholesterol:

- Poor diet
- Obesity
- Lack of exercise
- Smoking
- Age
- Diabetes
- Genetics

A blood test called a “lipid panel” will be used to verify your cholesterol levels. This lab test will be able to test for your total cholesterol amount, LDL, HDL and triglyceride levels. For the most accurate lab reading a fasting blood draw should occur after 9-12 hours without food or drink (water is ok).
Initially, changes made in your daily diet and exercise consistency is used as a first line choice. If your cholesterol levels remain high after these changes are made, then medication will need to be added to help manage your levels.

Common medications:

- **Statins**: block a substance your liver needs to make cholesterol causing the liver to remove cholesterol from blood. Examples: atorvastatin (Lipitor), pravastatin (Pravachol)
- **Bile-acid-binding resins**: prompts liver to use excess cholesterol due to binding to bile acids. Examples: cholestyramine (Prevalite), colesevelam (Welchol).
- **Cholesterol absorption inhibitors**: limits absorption of dietary cholesterol. Example: ezetimibe (Zetia)

**Don’t eat LESS, eat BETTER…**

**Tips to Cut Cholesterol**

- **Ban Trans Fats**: this type of fat raises your LDL (bad cholesterol), lower your HDL (good cholesterol), and increases the risk of heart disease and stroke. Found in fried foods, baked goods and margarine.

- **Increase Fiber Intake**: soluble fiber keeps your body from absorbing cholesterol. Foods like oatmeal, barley, apples, prunes and beans all help to lower your LDL levels.

- **Up the Fish**: having fish 2-4 times a week is both heart healthy and reduces cholesterol due to the reduced amount of saturated fat. Best picks include wild salmon, sardines and bluefin tuna.

- **Use Olive Oil**: replacing butter with olive oil may reduce LDL cholesterol by as much as 15% which is similar to the effects of using a low-dose of medication. Also, the good fats in this oil benefit your heart. Choose an extra-virgin olive oil due to more antioxidants which help prevent disease and less processed.

- **Go Nuts**: most types help lower LDL levels due to containing sterols. Sterols prevent the body from absorbing cholesterol. Watch your portion size though, they are high in calories!

- **Get Spicy**: cinnamon, black pepper, garlic, ginger and coriander can improve your cholesterol. One clove of garlic daily potentially lowers cholesterol by 9%
Recipe

**Sheet Pan Chicken Fajitas**

4 Servings

1 tablespoon chili powder
Salt/pepper
1 red or yellow pepper, seeded and sliced
1 yellow onion, thinly sliced
2 tablespoons extra-virgin olive oil
1 ½ pounds boneless, skinless chicken breast, sliced in ¼ inch slices
8 fajita-size tortillas, warmed

**Directions**

Preheat broiler to high. Line rimmed baking sheet with aluminum foil.

Combine chili powder, 2 tsp salt, 1 tsp pepper in small bowl. Place peppers and onions on prepared pan, drizzle with 1 tablespoon olive oil and ½ of the chili powder mix. Broil until softened and slightly charred, about 10 minutes. Remove from oven.

Toss chicken slices in remaining oil and chili mixture. Place on top of peppers and onions, broil approximately 5 minutes longer. Serve with tortillas, salsa, low-fat cheese, low-fat sour cream.

**Nutritional Analysis**

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<td>Saturated Fat: 3g</td>
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<tr>
<td></td>
<td>Cholesterol 125mg</td>
<td>Protein: 44g</td>
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</table>
Be the Best Version of YOU...

How does exercise help my cholesterol?

- Increases HDL
- Changes cholesterol’s particles making them larger and fluffier and less likely to clog arteries
- Low-impact aerobic exercise with a cholesterol-lowering diet has shown to improve total cholesterol
- Weight-loss reduces LDL levels
- Exercise stimulates enzymes that help move LDL from the blood to the liver causing overall reduction in levels
- Decreased triglyceride levels

Best exercises for lowering cholesterol

- Running or jogging
- Brisk walking
- Biking; both stationary and outdoor
- Swimming
- Water aerobics
- Weight training
- Yoga
Tips for getting started...

- Start slowly. If you are new to the exercise program start low and go slow. Start out with 15-20 minutes then increase as you improve.
- Aim for a work out to last 40 minutes. This includes 5 minutes to warm up and cool down, plus 30 minutes for the exercise.
- Ultimately make a goal of 200 minutes per week of exercise. You can achieve this by doing 30 minutes of exercise daily for 7 days OR doing a 40-minute work out for 5 days.
- Remember to always to do a warm up and cool down when doing exercises
- Aim for an intensity level of having the ability to hold a conversation without being too breathless.
- Hydrate, hydrate, hydrate!
- Try several varieties of exercise, see which ones fit you best
- Look for chances to be more active throughout your day such as taking a 15-minute walking break while watching TV.
Invest, Improve, INSPIRE…

“Things do not change; we change”
-Henry David Thoreau

How to change anything in your life…

**Step 1: Decide what you really want.**
What is your ultimate goal? What is keeping you from achieving that goal? Is it fear? Pain? Doubt? Or is it due to not having a specific goal? The more specific the goal will allow for better clarity and the formation of a plan to achieve your ultimate goal.

**Step 2: Associate immense pain if no change occurs and immense pleasure to changing NOW.**
The ability to change is not usually due to our lack of capabilities but unfortunately our lack of motivation. The only way a change can occur is if we attach an immense amount of urgency to the change. Consider where you are at currently, how you feel, any involved emotions and level of commitment to making a change. If you have tried in the past to change without success, then the level of pain for failing was not intense enough for you to want to change.

**Step 3: Interrupt the limiting pattern.**
To develop a thought or feeling of something occurs after we consistently develop a pattern of thought towards it. If we consistently think in the same way, then a change cannot occur. This pattern must be interrupted as it is occurring for it to be effective. Limiting thoughts need to be scrambled beyond what we recognize in order to break an old pattern.

**Step 4: Create an empowering alternative.**
The major reason most attempts at change are only temporary are due to the failure to find an alternative behavior to replace the old one. Again, as stated in step 1, have a detailed and specific goal in mind and have steps to achieve that goal.
Step 5: Use the new pattern until it’s a habit.
In order for a new change to become a long-term habit it must be repeatedly used every time. Envisioning using your new pattern will help make it a habit and decrease the chance of falling back into old patterns.

Step 6: Test it!
Now is time to verify if the change that was made is effective. If you find the pattern did not last you need revisit each step. Was your goal not specific or clear enough? Do you interrupt a thought pattern that you weren’t successful with before? Or do you need to find an alternative that is more empowering to create a lasting change?

-Adapted from: Anthony Robbins (1991) “Awaken the Giant Within”

Resources
Mayoclinic.org
Healthline.com
Webmd.com
Appendix H

Demographic Survey

Demographic and Personal Questions

1. What is your gender?
   __ Male
   __ Female

2. How old are you?
   __ year old

3. How much do you weigh?
   __ pounds

4. How tall are you?
   __ Foot __ Inches

5. Marital Status
   __ Married
   __ Divorced
   __ Widowed
   __ Single
   __ Other

6. What is your race?
   __ White/Caucasian
   __ Black/African American
   __ American Indian
   __ Asian
   __ Pacific Islander
   __ Other not specified
7. What is the highest level of education attained?
   ___ Some High School
   ___ High School Diploma or equivalent
   ___ Some college
   ___ Associate Degree
   ___ Bachelor’s degree
   ___ Master’s degree
   ___ Doctorate Degree

8. Have you been medically diagnosed with any of these conditions? (Select all that apply)
   ___ Coronary Artery Disease (CAD)
   ___ Stroke or Cerebral Vascular Accident (CVA)
   ___ Diabetes Mellitus (DM)
   ___ Osteoporosis
   ___ Congestive Heart Failure (CHF)
   ___ High Blood Pressure or Hypertension
   ___ High Cholesterol
   ___ Arthritis

9. How many other people live in your household?
   ___ I live by myself
   ___ I live with my spouse
   ___ I live with a relative(s)
   ___ I live with a non-relative(s)
10. What is your average monthly income?

___ Under $1100
___ $1101-$1500
___ $1501-$2000
___ $2001-$2500
___ Over $2501
Appendix I

Health-Promoting Lifestyle Profile II Survey

**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:

N for never, S for sometimes, O for often, or R for routinely

1. Discuss my problems and concerns with people close to me. N S O R
2. Choose a diet low in fat, saturated 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 N S O R 30-40 minutes 5 or more times a week).
17. Accept those things in my life which I can not 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
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
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
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 N S O R
stairs instead of elevators, parking car away from destination and walking).

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 N S O R nuts group each day.
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 meditation 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, and 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 others 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

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Appendix J

Reconsent Question for Post-Test Survey

By checking “Yes” I am giving my consent to participate in this Doctorate of Nursing Practice (DNP) Project Post-Test Survey and acknowledge that I was given information both verbally and in written form on the day of recruitment as to the purpose of the project being conducted.

___ YES
___ NO
Appendix K
Additional Post-Survey Questions

1. Did you find the weekly educational emails helpful in gaining and applying the knowledge of health promotion to your daily life and chronic disease management?
   __Yes
   __No

2. Did you find the monthly newsletter and quick reference guides helpful in gaining and applying the knowledge of health promotion to your daily life and chronic disease management?
   __Yes
   __No

3. How likely is it that you will apply the health promotion education you received in changing your lifestyle choices?
   __Not Likely
   __Likely
   __Very Likely
Appendix L
Survey Tool Permission

Dear Colleague:

Thank you for your interest in the Health-Promoting Lifestyle Profile II. The original Health-Promoting Lifestyle Profile became available in 1987 and has been used extensively since that time. Based on our own experience and feedback from multiple users, it was revised to more accurately reflect current literature and practice and to achieve balance among the subscales. The Health-Promoting Lifestyle Profile II continues to measure health promoting behavior, conceptualized as 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. The 52-item summed behavior rating scale employs a 4-point response format to measure the frequency of self-reported health-promoting behaviors in the domains of health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations and stress management. It is appropriate for use in research within the framework of the Health Promotion Model (Pender, 1987), as well as for a variety of other purposes.

The development and psychometric evaluation of the English and Spanish language versions of the original instrument have been reported in:


Copyright of all versions of the instrument is held by Susan Noble Walker, EdD, RN, FAAN, Karen R. Sechrist, PhD, RN, FAAN and Nola J. Pender, PhD, RN, FAAN. The original Health-Promoting Lifestyle Profile is no longer available. You have permission to download and use the HPLP II for non-commercial data collection purposes such as research or evaluation projects provided that content is not altered in any way and the copyright/permission statement at the end is retained. The instrument may be reproduced in the appendix of a thesis, dissertation or research grant proposal. Reproduction for any other purpose, including the publication of study results is prohibited.

A copy of the instrument (English and Spanish versions), scoring instructions, an abstract of the psychometric findings, and a list of publications reporting research using all versions of the instrument are available for download.

Sincerely,
Susan Noble Walker, EdD, RN, FAAN
Professor Emeritus
COLLEGE OF NURSING
Community-Based Health Department
985330 Nebraska Medical Center
Omaha, NE 68198-5330
402/559-6382