# Effect of a Lifestyle Modification Education Program Among an Inner-City Church Adults' Overall Health

By

Catherine N. Imbeah

A Directed Scholarly Project Submitted to the
Department of Nursing
in the Graduate School of
Bradley University in
partial fulfillment of
the requirements for the
Degree of Doctor of Nursing Practice

Peoria, Illinois

# **DNP Project Team Approval Form**

Bradley University Department of Nursing

Effect of a Lifestyle Modification Education Program Among an Inner-City Church Adults' Overall Health

Ву

Catherine N. Imbeah

has been approved

December 7, 2020

Approved:	Deborah Erickson PhD, RN 12-07-20
	(DNP Project Team Chairperson name, credentials & date)
	Adae Amoaka MD 12-07-20
	(DNP Project Team Member name, credentials & date)
Approved:_	Grace Adiyiah-Addo MA, RN 12-07-20
	(DNP Project Team Member name, credentials. & date)

#### Acknowledgement

I would like to take this opportunity to express my sincere gratitude to all the key players involved in this scholarly project. First and foremost, my utmost gratitude goes to the almighty God for His abundant grace and indescribable favor bestowed upon me, coupled with an enduring ability to embark, and succeed in this journey. I would like to thank my mentors Dr. Adae Amoako and Mrs. Grace Adiyiah-Addo for their time, patience, support, and feedback in helping to ensure success of this project. I would also like to thank my chairperson and lead professor Dr. Maureen Hermann from Bradley University, who had been patient with me, constantly checking up on me, the status of the project, and providing the best guidance one could possibly give. Additionally, interim instructors, Dr. Karin Smith, and Dr. Deborah Erickson from Bradley University, thank you so much for your availability, support and feedback. I am truly and sincerely grateful. Furthermore, I would like to thank my pastor and his wife, siblings, WGIC family, and friends for the support and encouragement to be strong, steadfast, and run the race with all diligence and perseverance. Your participation in this project meant a great deal to me. I would not have accomplished this program without you. Finally, I would like to thank my loving husband and amazing children as they sacrificed moments and times to spend with me. Your support, love, patience, encouragements, motivations, and inspirations contributed not only to the success of this project, but my accomplishment throughout this doctoral program. Words cannot express my gratitude for your effort, sacrifice, devotion, and dedication throughout this journey. I am greatly, deeply, and forever grateful.

#### **Abstract**

Obesity is a common, yet serious metabolic condition affecting the health and finances of individuals in today's world. Unhealthy dietary intake, physical inactivity, inadequate sleep, and unhealthy stress management skills are few of the contributions to the rising cases of obesity both nationally and globally. The identified problem may be related to insufficient awareness and education on health promotion as well as non-compliance to healthy lifestyle behaviors.

Effective education and compliance to healthy lifestyle modifications have proven to yield results that lead to prevention of diseases, maintenance of a healthy life, and reduction of comorbidities, associated expenses, and fatalities. The purpose of the Healthy Lifestyle Forever project is to increase obesity awareness, expand on an already existing healthy lifestyle education, and improve on healthy lifestyle choices and behaviors in adults through a healthy lifestyle educational workshop.

The Healthy Lifestyle Forever program embarked on a four-week quality improvement project consisting of twenty-three participants from an inner-city church. A virtual health education fair was held accompanied with questionnaires as evaluation tools to assess participants' level of knowledge, understanding, and compliance to the education provided. This was measured after the education fair, two, and four weeks into the program. The findings from this project did not demonstrate significant changes in participants' level of knowledge, physical activity, dietary choices, stress management, and sleep habits. Future projects with prolonged timeframe and larger sample will be beneficial in yielding more prominent results.

Keywords: obesity, lifestyle, modification, cost, hospitalization, nutrition, physical activity, sleep

# **Table of Contents**

Title Page	1
DNP Project Team Approval Form	2
Acknowledgement	3
Abstract	4
Table of Contents (including appendices)	5
Chapter I: Introduction	7
a. Background and Significance	8
b. Needs Assessment	10
c. Problem Statement	11
d. Project Aim	11
e. Clinical Question/PICOT	12
f. Congruence with Organizational Strategic Plan	12
g. Synthesis of Evidence	13
h. Conceptual or Theoretical Framework	18
Chapter II: Methodology	20
a. Project Design	20
b. Setting	21
c. Population/Sample	22
d. Tools and/or Instruments	23
e. Project Plan	24
f. Data Analysis	27
g. Institutional Review Board (IRB)	28

Chapter III: Organizational Assessment and Cost Effectiveness Analysis29
a. Organizational Assessment: Readiness for Change
b. Cost Factors
Chapter IV: Results
a. Analysis of Implementation Process
b. Analysis of Project Outcome Data
Chapter V: Discussion
a. Findings Linked to Objective
b. Limitations46
c. Deviations from Project Plan
d. Implications
Chapter VI: Conclusion
a. Value of the Project52
b. DNP Essentials53
c. Plan for Dissemination54
d. Attainment of Personal Goals and Professional Goals55
References56
Appendices

# Effect of a Lifestyle Modification Education Program Among an Inner-City Church Adults' Overall Health

# **Chapter 1: Introduction**

The way lives are led is essential to the prevention of diseases, maintenance of a healthy life and reduction of comorbidities, complications, and fatalities (Burgess et al., 2017). Lifestyle intervention and modifications are critical in the maintenance of an overall healthy life. The body mass index (BMI) guides the normalcy of individuals' weights by categorizing into underweight (BMI below 18.5), normal (BMI of 18.5-24.9), overweight (BMI of 25-29.9), and obese if BMI is greater than or equal to 30 (Buttaro et al., 2017).

Lifestyle interventions or modifications are mostly directed to the overweight and obese population, with little effort addressing the underweight population. Today, obesity is considered the most prevalent metabolic disease world-wide with epidemic proportions in both developed and developing countries (Baillot et al., 2015). The prevalence of class II and III obesity (BMI greater than or equal to 35kg/m²) in North America has increased significantly over the last decade (Baillot et al., 2015). Overweight and obesity are associated with multiple comorbidities such as hypertension, insulin resistance type 2 diabetes, dyslipidemia, cardiovascular diseases, stroke, sleep apnea, musculoskeletal pain, and cancer (Baillot et al., 2015). Underweight on the other hand, results in malnutrition, vitamin deficiencies, anemia, osteoporosis, decreased immune function, increased risk for complications from surgery, fertility issues caused by irregular menstrual cycles, and growth and development issues, especially in children and teenagers (Healthline, 2015). All these comorbidities further lead to impaired health-related quality of life (Baillot et al., 2015).

Education is an important aspect of the human life. Proper and adequate education on healthy lifestyle behaviors can significantly impact the wellbeing of the population. Obtaining an education or the lack of education and knowledge can determine one's success or failure in life (Burgess et al., 2017). Frequency, consistency, and reiteration are essential in ensuring that education provided is acknowledged, accepted, and agreed to be enacted upon.

#### **Background and Significance**

Obesity is a serious condition that poses serious health risk worldwide. Obesity has shown to cause the development of chronic conditions such as hypertension, insulin resistance type 2 diabetes, dyslipidemia, cardiovascular disease, sleep apnea, musculoskeletal pain, and cancer (Baillot et al., 2015). Additionally, there is an increased healthcare expenditure of about \$210 billion dollars per year associated with obesity and associating complications in the United States (The State of Obesity, 2018). Furthermore, job absenteeism costing about \$4.3 billion per year with lower work productivity costing employers about \$506 per obese worker has been associated with obesity annually in the United States (The State of Obesity, 2018).

Lifestyle intervention involves the implementation of behavioral and physical actions to achieve a specific purpose of health improvement and lifestyle modification deals with the alteration or modification of an existing lifestyle, behavior, or habit (Nyenhuis et al., 2018). This may include dietary types and habits, physical activity, sleep habits, recreational drugs, smoking, sexual habits, and stress management techniques. All these elements affect the overall well-being of a person. Studies have shown that a positive lifestyle modification impacts an individual's weight, thereby positively influencing the BMI to a healthier level, leading to an overall healthier life (Arab et al., 2017). The healthier the BMI, the lesser the risk of acquiring diseases, and the associated comorbidities and complications (Baillot et al., 2015). Baillot et al. state that

overweight and obesity have been on the rise for the last ten years. Hales et al. (2017) concur the prevalence of obesity between 2015 to 2016 alone was 39.8% in adults affecting 93.3 million Americans, with higher rates among middle aged adults than the younger counterpart. Among the youth, the prevalence rate within these same years was 18.5% (Hales et al., 2017). Highest rates of 20.6% were found among adolescents ages 12 to 19 years, 18.4% among youth ages 6 to 11 years, and 13.9% among children ages 2 to 5 years (Hales et al., 2017). These rates were found to be higher in non-Hispanic blacks and Hispanic adults than non-Hispanic whites and Asian (Hales et al., 2017).

Several lifestyle modification programs and policies are in existence to assist in suppressing the rise of obesity. These lifestyle modification programs are often community-based, clinic-based, work-based, and school-based. Such programs include, but not limited to Steps to Wellness, an intervention program geared toward increasing physical activity at the workplace; and Healthy Food Service Guideline, which provides and makes available healthier food choices and nutrition standards for foods in schools. Additionally, these programs offer dietary recommendations of vegetables, fruits, whole grains and non-fat or low-fat dairy products and physical activity recommendations (Centers for Disease Control and Prevention [CDC], 2019). Despite the efforts aimed at reducing obesity and ensuring a healthy lifestyle, there are still gaps and barriers hindering the success of these programs. Various studies have identified factors contributing to higher attrition rates of participants in lifestyle intervention and modification programs. These factors include but are not limited to lack of access or limited access to the programs, declined motivation, newly developed comorbidities, and other personal problems (Crump et al., 2016).

#### **Needs Assessment**

"Obesity is common, serious and costly" (CDC, 2018). This has been and still is a major concern globally, specifically the United States of America. Obesity is shown to be a contributing factor to many health-related diseases such as cardiovascular diseases, cardiopulmonary diseases, metabolic diseases, musculoskeletal pain, and cancers (Baillot et al., 2015). The current obesity rate in the United States shows differences in gender, race, and socioeconomic status. The data reveals that obesity is more prevalent in women (41.1%) than men (37.9%); more pronounced in people of lower socioeconomic status (42.6%) than the counterpart (29.7%); and also higher among Latinos (47%), and African Americans (46.8%) than Caucasians (37.9%) (CDC, 2018; Henry, 2018).

Healthcare expenditures associated with obesity is about \$210 billion dollars per year nationally (The State of Obesity, 2018). In the state of Maryland, 28.3% of adults are considered obese (Maryland Department of Health, 2020). This number has decreased from 31.3% in 2017, yet obesity still ranks 26<sup>th</sup> in the nation, costing the state of Maryland approximately \$5.2 billion in treatment expenditures and about \$20.5 billion in lost productivity (Maryland Department of Health, 2020; The State of Obesity, 2019; Trust for America's Health, 2018). As one of the largest cities in the state, Baltimore city had an obesity rate of 33.60% with Baltimore County at 28.20% in 2015 (Open Data Network, 2016). Baltimore city is the most populous city in the state of Maryland and accounts for approximately a third of the population that is obese, therefore, the cost of obesity treatment expenditure in Baltimore city is a significant portion of the above stated amount for the entire state of Maryland (Baltimore City Health Department, 2017; World Population Review, 2019).

The United States of America is a country inhabited with immigrants from all over the world. Most of these foreigners are from underdeveloped countries with little or no access to healthy diet or quality healthcare as compared to their present comfort in the United States (Omenka et al., 2020). Moreover, these immigrants may not be taking full advantage of the improvement in lifestyle opportunities. Some are still attached to their heritage and in denial of the shortcomings, which contributes to the impact on overall health (Omenka et al., 2020). This could possibly be associated to the lack of or limited education. As people age, a decline in metabolism, strength, and immune system occurs, paving way for morbidities and mortalities. Examples of acute and chronic conditions that may develop from unhealthy lifestyle include obesity, hypertension, diabetes, stroke, gastroesophageal reflux disease, among others (Baillot et al., 2015).

#### **Problem Statement**

Obesity is a serious condition that leads to many morbidities and even mortality (Burgess et al., 2017). There are increased hospitalizations and healthcare expenditures associated with obesity and its associated complications (The State of Obesity, 2018). Changes in lifestyle behaviors and activities have shown success of healthy life such as normal BMI, prevention of illnesses, and obesity related comorbidities and mortalities as well as decreased cost of health-related expenditures (Sun et al., 2017). Education is essential in ensuring a healthy lifestyle is achieved. The lack thereof can be detrimental to the population.

# **Project Aim or Purpose**

This project aims to increase awareness, expand on an already existing healthy living education as well as improve healthy lifestyle choices and behaviors in adults 18 years of age and older after attending a healthy lifestyle educational workshop. The project will focus on

primary and secondary prevention measures such as physical activity, nutrition, mental health, and medication compliance. This church-based project will evaluate the impact of the program in obtaining an overall healthy life (Buttaro et al., 2017). Lifestyle modification education will be provided to all participants. Frequent reiterations as well as evaluations will be conducted to remind the participants of the importance of making healthy lifestyle choices not only for today or tomorrow, but rather, for a lifetime. This approach will help determine the effect of frequent education and reiteration of lifestyle behavioral changes on establishing and maintaining a healthy life.

# **Clinical Question/PICOT**

The clinical question for this project is: In adults 18 years of age and older, what effect does education on lifestyle modification have on the knowledge level and overall health behavior within a period of four weeks?

# **Congruence with Organizational Strategic Plan**

Winning Grace International Church (WGIC) is a non-denominational, charismatic church located in Baltimore, Maryland. WGIC members include about 150 adults, youth, and children. The mission of the church is to ensure everyone is presented complete in Christ with a vision of ensuring the members are saved, sanctified, sing God's praises, are serviceable, and succeed in all areas of life (Winning Grace International Church [WGIC], 2020). The vision and mission of the church are intended to be achieved by the constructs of five pillars: ensuring members are firmly grounded in faith, have a stable family life, are appropriately fit and healthy, obtain financial stability, and experience fun (WGIC, 2020). WGIC members believe the physical body is the temple of God and by adhering to a healthy lifestyle, the body will be strong and fit to carry on the great commission as mandated to the followers of Jesus. Thus, the

members strive to facilitate positive lifestyle behaviors by encouraging healthy diet, physical activity, adequate sleep and rest, healthy stress coping mechanisms, smoking and alcohol abstinence, as well as sexual abstinence until marriage. As a member of WGIC and a believer of the mission statement, a program that intends to educate and motivate the members to live a healthy life is a paramount component in achieving WGIC's mission. Hence, this project will contribute and assist the members in acquiring healthy lifestyle, which is in accordance with part of the vision to be fit and be in good health.

#### **Synthesis of Evidence**

The search strategy included the following databases: Cumulative Index of
Nursing and Allied Health Literature (CINAHL) Plus, Elton B. Stephens Co (EBSCO), Google
Scholar, PubMed Central, and Cochrane Library. Keywords used to define the search included
obesity, overweight, underweight, lifestyle modification, lifestyle intervention, risk factors,
complications, comorbidities, mortalities, prevalence rate, costs of healthcare, and health care
expenditure. The use of these keywords individually and combined resulted in an abundance of
literature. The literature was thoroughly examined for articles linked to lifestyle modification's
effect on BMI, obesity associated morbidities, and overall health. The literature review process
consisted of thirty-five articles with twenty of them used in this synthesis of evidence. The
limitations included English language only, publication within the last five years and full text
availability. The inclusion criteria used were the focused population, involvement of lifestyle
modification activities, resulting outcomes, and date of publication.

#### Nutrition

The type, amount, and caloric intake of the food consumed play a major role in obesity.

Consumption of healthy or good sources of carbohydrates, fats, proteins, fruits, and vegetables

are essential in the acquisition and maintenance of a healthy life. Low consumption of salt, bad carbohydrates, and unhealthy fat diets are essential in the management and prevention of morbidities such as diabetes, hypertension, hyperlipidemia, and stroke (Burgess et al., 2017; Yang et al., 2017). Furthermore, not all low diet is healthy diet. It is pertinent to distinguish between healthy and unhealthy diet and to make dietary choices that will provide nutritious values and substance to one's overall health. A study was conducted by Craemer et al. (2017) which concluded that nutrition-only interventions were more effective than routine prenatal care, exercise alone, or exercise plus nutrition in preventing excessive gestational weight gain. This was evidenced by the statistically significant lower rates of excessive gestational weight gain and the potential highest probability of helping women achieve Institute of Medicine gestational weight gain target (Craemer et al., 2017). Additionally, Sun et al. (2017) concluded that participants receiving dietician delivered intervention with nutrition education as compared to those from other personnel experienced a reduction in overall weight within a period of 12 months.

# Physical Activity

Lifestyle modification is one of the most effective ways of reducing weight and maintaining a normal, healthy life. Physical activity is an essential component of ensuring weight loss is achieved and maintained in a healthy manner. Baillot et al. (2015) recommend the systematic inclusion of physical activity in managing a healthy lifestyle. The American Heart Association (2018) recommends at least 150 minutes of moderate intensity aerobic activity or 75 minutes of vigorous aerobic activity spread out per week to ensure a healthy, fitting life. The study conducted by Baillot et al. (2015) revealed significant improvement in weight and cardiometabolic risk factors in obese individuals with lifestyle related physical activity. Crump et

al. (2016) studied the effect of high BMI and low aerobic capacity on hypertension development. Results showed association of high BMI and low aerobic capacity in late adolescence with higher risk of hypertension in adulthood (Crump et al., 2016). In other words, there is a higher propensity of individuals with high and even normal BMI developing hypertension if lifestyle modification of increased physical activity is not implemented at an early stage in life (Crump et al., 2016). Yang et al. (2017) concurred that lifestyle modifications such as adequate physical activity, in addition to low salt intake and compliance of prescribed medication, are essential in well managing and reducing morbidities.

#### **Body Mass Index**

Body mass index (BMI) is an extraordinarily strong indicator of an individual's overall health. BMI is calculated by using an individual's height and weight and categorized into underweight (BMI < 18.5), normal (BMI = 18.5 - 24.9), overweight (BMI = 25.0 - 29.9), and obese (BMI > 30.0) (Buttaro et al., 2017). Obese is further subdivided into Class 1 (BMI of 30 - 35), Class 2 (BMI of 35 - 40) and Class 3 (BMI of 40 or higher) (Buttaro et al., 2017). A study conducted by Jane et al. (2017) illustrated the effect of social media on overall BMI. The results showed significant improvement in weight reduction and BMI among the Facebook group as compared to the pamphlet group and control group (Jane et al., 2017). Moran et al. (2019) conducted a study on women who were overweight or obese and had polycystic ovarian syndrome with severely depressive symptoms. The researchers concluded that despite the potential drop out from the weight loss intervention, the participants had a lower attrition rate and greater success in losing weight once appointment attendance was enhanced (Moran et al., 2019). Arab et al. (2017) also showed a significant reduction in weight and BMI in overweight patients with non-alcoholic fatty liver disease independent of physical activity level.

#### **Morbidities**

Obesity has shown to contribute to various and complex medical problems. Baillot et al. (2015) and Burgess et al. (2017) concurred that obesity can lead to the development of hypertension, insulin resistance type 2 diabetes, dyslipidemia, cardiovascular disease, stroke, sleep apnea, musculoskeletal pain, and cancer. Yang et al. (2017) stated that lifestyle modifications such as adequate physical activity, low salt intake, and prescribed medication compliance are essential in well managing and keeping adequate blood pressure control. Additionally, a study was conducted by Wang et al. (2018) that compared and evaluated the feasibility of a mobile health-enhanced intervention with that of a paper-based multiple-behavior intervention in monitoring glycemic outcomes among overweight or obese adults with type 2 diabetes mellitus in underserved communities. Results confirmed the feasibility that a simplified behavioral lifestyle intervention using mobile health-based self-monitoring in an underserved community had a higher preliminary efficacy than the paper-based self-monitoring (Wang et al., 2018). Joiner et al. (2017) concurred promising evidence of the efficacy of eHealth lifestyle interventions with diabetes prevention program-based on weight loss and reduced complications of diabetes. Furthermore, Dall et al. (2015), Marrero et al. (2016), and Sun et al. (2017) demonstrated a positive impact of lifestyle interventions and modification programs consisting of diet and physical activity on the health, weight and wellbeing of prediabetic patients as well as the long term societal benefits, treatment costs, and expenditures. Moreover, due to the variation in population sample, Ibrahim et al. (2016) and Shommu et al. (2016) demonstrated the effect of culturally adapted community programs to better manage chronic diseases, improve risk factors, reduce barriers to healthcare access, and promote health-related quality of life.

# **Bariatric Surgery**

Modification of lifestyle is one of the healthy ways of losing and maintaining a healthy weight, however, the process can be particularly challenging. The hurdle may be a serious struggle for severely obese individuals with multiple comorbidities or complications (Baillot et al., 2015). Bariatric surgery, therefore, is a more effective way than implementation of a modified lifestyle (Baillot et al., 2015). However, lifestyle modifications should not be disregarded or not incorporated into daily activities after the procedure, but rather, adhered more so as to maintain and sustain the decreased weight and BMI (Baillot et al., 2015).

#### Psychological Factors

There is a significant impact of psychological factors on obesity. Evidence suggests psychological behaviors may be a contributing factor to the development of obesity (Pjanic et al., 2017). Depression, low self-awareness, low self-esteem, low self-worth, and poor stress management skills are contributing factors of obesity (Pjanic et al., 2017). Pjanic et al. concluded that patients who were self-aware and paid attention to the body, feelings and handled negative feelings experienced significant decreased weight and improved wellbeing. Therefore, as part of a non-surgical interdisciplinary multi-professional obesity program, assessment, and treatment of psychological aspects like depression, emotion regulation skills, body awareness, and acceptance are essential (Pjanic et al., 2017). Additionally, Moran et al. (2019) stated that overweight or obese women with polycystic ovarian syndrome and severely depressive symptoms were more likely to withdraw from a weight loss intervention, whereas greater appointment attendance promoted less attrition and greater success in weight loss.

# **Conceptual or Theoretical Framework**

The Health Belief Model (HBM) is the theoretical framework to support this scholarly project. The HBM helps predict if and why actions are taken to prevent, detect, or control illnesses; hence, obtaining and maintaining a healthy lifestyle (Glanz et al., 2015). The HBM concludes that an individual's belief in a personal risk or threat of an illness or disease, combined with the individual's belief in the effectiveness or success of the recommended health behavior or action, will contribute to a person's likelihood to adopt change or behavior (LaMorte, 2019). As the most widely used conceptual framework in health behavior research, the HBM explains changes in health-related behaviors and acts as a guiding framework for interventions (Glanz et al., 2015). The HBM consists of two components of health-related behavior: firstly, the desire to avoid illness or get well if already sick; and secondly, the belief that a specific health action will prevent or cure a disease depending on the individual's perceptions or beliefs of the benefits or barriers of the health behavior (LaMorte, 2019).

The components of the health belief model consist of six constructs: perceiving susceptibility (belief of being at risk for a disease); perceiving severity (belief of potential serious consequences or complications from the condition); perceiving benefits (belief of positive gains and advantages once action is taken); perceiving barriers (belief of potential obstacles to taking action or resulting from action); cue to action (belief of internal or external factors that instigates need for action); and self-efficacy (belief of a person's level of confidence and ability to successfully perform a behavior) (Boston University, 2018; Glanz et al., 2015; LaMorte, 2019). According to Glanz et al., people are likely to engage and commit to changes in health behavior once awareness and belief of these constructs are ignited.

The HBM is chosen to analyze the clinical problem of obesity and to evaluate the effect of education involving lifestyle modification among adults 18 years of age and above in an inner-city church. The HBM will serve as a guide to assist the participants in making healthy lifestyle decisions pertinent to their overall health and well-being. The above mentioned constructs can assist in bringing awareness of risks, severity, costs and complications of obesity; the benefits and barriers associated in overcoming obesity and achieving an overall healthy life; as well as the need for action and ability or confidence to implement a healthy lifestyle behavior.

#### **Chapter II: Methodology**

# **Project Design**

Healthy Lifestyle Forever (HLF) is a four-week quality improvement project design. Winning Grace International Church (WGIC) organizes annual health education fairs to inform the members of healthy living; undergoing annual health and physical exams; and ensuring a safe, healthy, and quality well-being. The HLF project is intended to improve and expound on the already existing WGIC health education fair by providing evidence based education and practices on various healthy lifestyle choices and following up on the participants to ensure understanding of the education provided as well as efforts made to sustain daily healthy lifestyle choices.

Members of WGIC will be informed of the HLF program and those that meet the inclusion criteria (such as men and women, 18 years of age and older, with or without medical conditions and comorbidities, speak English, and are members of Winning Grace International Church) will be allowed to participate. Qualifying participants will receive pertinent information such as the consent forms, education material, daily log sheets, pre-and post-assessment survey questionnaires, and evaluation sheets. The consent form and pretest questionnaire will be given a week prior to the health education fair. Participants will be required to review, complete, and return by the day of the education session. Education regarding obtaining and maintaining a healthy lifestyle in order to achieve a positive overall health status will be provided. Participants will be encouraged to interact and participate by asking questions and contributing to the discussion. At the completion of the education session, a posttest questionnaire will be distributed to assess participants' level of knowledge and understanding of the education provided. If time permits, participants will watch a short video or engage in a low-level physical

activity to demonstrate examples of activities that can be performed indoors as well as those that cannot. If time does not permit, links to low-level activities online that are included in the education material will be recommended. The participants will receive a mid-program follow-up via phone call, text message, email, or in-person inquiring of any changes in lifestyle behavior, questions they may have, and assistance or additional resources they may need. A post program evaluation survey will be conducted at the end of fourth week to evaluate participants' knowledge of the education, along with feedback and effectiveness of the program on the participants' overall health. Personal information and data will be de-identified, stored, and analyzed using a password protected Microsoft excel and Google forms.

# **Setting**

The HLF program will be conducted at WGIC, a multicultural and multinational charismatic church located in the inner city of Baltimore, Maryland. WGIC's mission is derived from Colossians 1:28 of the Holy Bible requiring everyone to be presented complete in Christ (WGIC, 2020). WGIC intends on fulfilling this mission by helping people to be saved; live a sanctified life; sing God's praises; serve God and humanity; and become successful in all endeavors (WGIC, 2020). WGIC houses roughly 150 members including men, women, and children from various nationalities such as Ghana, Nigeria, Zambia, Sierra Leone, Liberia, Trinidad and Tobago, and the United States of America. However, only willing, and consented individuals will be participants of the project. The WGIC facility is conducive to safely carry out the HLF program. Authorization and permission to conduct the project at the church have been granted by the church leadership. WGIC has graciously donated one of the rooms in the church consisting of chairs, tables, a writing board, television, and adequate space to be utilized as the

main hub for implementing and operationalizing this project for the duration of the four-week program (see appendix B).

WGIC holds annual health education fairs for the members and information on obtaining and maintaining a healthy living is presented. The HLF program will be the first implemented program that evaluates and follows-up on WGIC members' status and progress on the provided education. HLF program director will implement the project and evaluate the participants for the duration of the four-week program. HLF will encourage and support members' desire to be educated and informed, but more importantly, compliance and commitment to making a healthier lifestyle change.

# **Population/Sample**

The sample will consist of approximately 20 WGIC members over the age of 18 years. These participants will voluntarily participate in the HLF program after carefully reviewing the information involved and consenting to fully participate (see appendix E). Participants that meet the inclusion criteria may be allowed to participate and must consent to committing through the duration of the project. An indication of willingness to improve lifestyle and obtain a healthy BMI as well as overall health through increased physical activity, healthy diet, decreased stress and improved mental health status, adequate sleep, and medication compliance will be important factors for participation in this project. The inclusion criteria for HLF are English speaking members of WGIC ages 18 years old and above with or without medical conditions and comorbidities. The exclusion criteria for HLF are individuals below the recommended age, non-members of WGIC, non-English speaking, or those with a debilitating illness who seek frequent medical attention and hospitalization.

#### **Tools and/or Instruments**

A registration form will be made available to record and deidentify participants' information with exception of phone numbers and email addresses (see appendix D). This will be used to follow up and send subsequent information to the participants. A lifestyle modification health questionnaire, known as HLF pre-test questionnaire, will be administered to all consenting individuals at the beginning of the health education fair to assess the level of knowledge on healthy living each participant acquires (see appendix G). A post-test questionnaire will also be completed at the end of the education fair to evaluate the understanding of the healthy lifestyle education provided as this will influence daily choices made by the participants (see appendix H). A mid-program follow-up questionnaire will be completed by the participants two weeks into the program to evaluate the impact of the healthy lifestyle education on the daily choices within the past two weeks (see appendix J). Finally, a program completion evaluation and survey will be completed four weeks into the program, which is the completion of the program to evaluate the effectiveness of the program in relation to making healthy lifestyle choices as well as on the overall health of the participants within the past month (see appendix I). The HLF questionnaires will be similar, yet slightly different throughout the program as the forms will have some modifications pertinent to the specific phase of the program. The questionnaires and evaluation forms are created by the student; therefore, they may not be valid or reliable as these tools have not been tested, and this will be the first time used. The uniformity of the multiple choices may make the responses standard and unbiased, but not necessarily reliable or valid until tested and proven. This will aid in determining the knowledge level and understanding of the healthy lifestyle education and how the participants have been able to apply the knowledge obtained in the daily choices for a period of four weeks. The questionnaires and evaluation forms will also

be used to help develop or modify strategies that will improve overall healthy lifestyle education as well as evaluate the efficacy of these strategies. Log sheets to trend change in diet, physical activity, and sleep patterns on a daily basis will also be provided to participants for guidance and direction but will not be collected and used as part of the data (see appendix F).

# **Project Plan**

# Individual Participation

A verbal announcement and flyers will be used as the recruitment tool to inform the members of WGIC about the HLF program (appendix C). Once information is relayed and individuals' interest in participating is obtained, the consent forms (appendix E); questionnaires (appendices G, H and J) and evaluation forms (appendix I) involved will be provided. A health education fair will be conducted to create an opportunity to assess the participants' level of knowledge on healthy living and to provide education on healthy lifestyle choices and practices based on current evidence. Verbal and written education materials defining healthy living, BMI's importance on one's overall health, dietary modifications, increasing physical activity, and how to obtain and maintain a normal and healthy lifestyle will be given to the participants.

# **Group Formation**

The participants will participate in the HLF program voluntarily after reviewing and signing to the informed consent (see appendix E). All participants will complete pre-test, post-test, mid program, and final evaluation forms at the appropriate phases of the program (see appendices G, H, I and J). All participants will receive the same education on the day of the health education fair (see appendix K) with follow up two weeks into the program via phone, text messages or emails. Additionally, frequent education reminders and reiterations will be conducted via phone calls, text messages, email, and in-person. An opportunity will be given to

the participants at the end of the four weeks via evaluation forms to reassess and evaluate the success of the HLF program. The participants will be reminded of the essence and vitality of maintaining a healthy lifestyle not just for the duration of the program, but for a lifetime. All forms and data will be collected and organized at the end of the four weeks and analyzed to determine if the education on healthy lifestyle and behavioral choices made a positive impact on the participants' overall health.

**Outcomes.** The projected outcomes of the HLF project are as follows:

- Assess individuals' knowledge and understanding of the program. This will be
  measured by at least 95% of the participants' ability to correctly respond to the
  purpose and significance of ensuring a healthy lifestyle on the post-test
  questionnaire by the end of education fair.
- 2. Increase positive changes in behavior related to healthy lifestyle participation as evidenced by one or more positive health changes in physical activity and diet documented by at least 50% of the participants on the mid-program evaluation form by the end of week two.
- Achieve a participation rate of 75% by the participants in modification of their lifestyle through diet and physical activity documented on the final evaluation form by the end of week four.

**Data Collection.** Data collection for the project will commence in middle of May to middle of June for a period of four weeks. HLF program director will obtain participants' names, which will be deidentified to alphanumerical value, as well as consent forms, phone numbers, and email addresses. Education on obtaining and maintaining a healthy lifestyle in addition to a few lifestyle modifications that may be essential to one's overall health will be provided. The

educational information or strategies that will be shared include choosing good and healthy sources of nutrition such as good and healthy carbohydrates, proteins, fats, fruits, and vegetables; engaging in low, moderate, or vigorous physical activity such as brisk walking, jogging, Zumba, or yoga, at least 150 minutes per week; getting approximately six to eight hours of sleep on a daily basis; effectively coping with stress in a healthy manner; recognizing signs and symptoms of common mental health issues such as depression and offering aid; complying and adhering to prescribed medications; and being current with developmental health screenings. Log sheets consisting of daily dietary caloric intake, physical activity and sleep hours will be provided to participants as a guide or resource but will not be collected and analyzed as part of the data (see appendix F). To be compliant with the Health Insurance Portability and Accountability Act (HIPAA) regulations, participants' data will be collected and stored in an encrypted password protected Microsoft excel sheet and Google forms. Participants' data will be de-identified, meaning each participant will be assigned an arbitrary alpha-numerical value. Personal identifiable information such as name will not be documented in the data collection software. On the other hand, phone numbers, email addresses and other information obtained from the participants will be documented.

Evaluation and Sustainability Plan. At the completion of the HLF program, the data results will be analyzed and shared with the participants as well as the leaders of WGIC. Emphasis will be placed on the effect of engaging in a healthy lifestyle program to ensure an overall healthy life and well-being. Furthermore, participants will be encouraged to continuously apply the healthy lifestyle education to maintain a healthy physical, mental, and social life; prevent diseases; and reduce comorbidities. Quarterly education fairs or biannual health

education sessions can be held to remind, motivate, and encourage WGIC members to continue engaging and practicing healthy living.

Timeline. The timeline for the commencement of the program will depend on when approval by Institutional Review Board (IRB) is obtained. A period of four weeks allotted for the project will most likely be from middle of May 2020 to middle of June 2020. After completion of the program, WGIC will have ownership of the program. The director of WGIC health ministry will ensure the HLF program tool is incorporated in the annual education fair to encourage and motivate the members of the church to strive for a good and healthy overall health status.

#### **Data Analysis**

Knowledge and understanding of the effect of the HLF program on overall health will be evaluated by completion of questionnaires and evaluation form. Participants will be encouraged to answer all questions accurately and truthfully. Documented pre-, mid-, and post-test questionnaires as well as final evaluation form will be analyzed upon completion of the program in June 2020. Changes in dietary intake such as increased intake of good and healthy proteins, fruits, and vegetables; decreased fast food intake; and increased water intake as compared to sugary drinks will be analyzed. Further assessments will include increased physical activity, adequate sleep, and healthy management of stressors. Participants' level of knowledge and understanding of healthy living pre- and post-program will be analyzed to determine any significant changes encountered as a result of HLF education. Using Microsoft Excel and Google forms, bar charts, pie diagram, or pivot tables will be created to depict the data and analyze the results.

#### **Institutional Review Board/Ethical Issues**

Policies and procedures set forth by Bradley University's Committee on the Use of Human Subjects in Research (CUHSR) will be adhered to and complied with to obtain Institutional Review Board (IRB) approval for expedited review by the institution (see appendix A). WGIC does not have IRB resources, therefore, a letter authorizing the use of the facility as well as the members will be obtained from the church leadership (see appendix B). Acquiring WGIC's letter of authorization assist with CUHSR approval. Once approval is obtained, consent and assent forms will be delivered and explained to each participant prior to the initiation of HLF program activities by a designated member of the team. Participants will have one week to review the consent and information regarding the project, which should assist in making a well-informed decision to commit and comply to the program for the proposed length of time. Within that week of deliberation, participants will be allowed to choose not to participate and withdraw from the program. The HLF program director will be the only one with access to participants' information, which will be stored in a password protected software. This is to ensure adherence and compliance to HIPAA to protect participants' privacy.

# Chapter III: Organizational Assessment & Cost Effectiveness Analysis Organizational Assessment

# Readiness for Change

The participants of this lifestyle modification education program may be ready for growth as evidenced by the number of participants' enrollment in the program. This may be an indication of the participants' willingness to improve in their psychosocial, behavioral, and overall health. However, the participants' commitment and compliance to the education and immediate changes in lifestyle behaviors such as increased healthy nutrition, physical activity, healthy sleep habits, healthy stress management skills, and medication compliance may play an important role. Healthy lifestyle promotes health and well-being, while preventing diseases and decreasing comorbidities.

The director of WGIC health ministry and the pastor of the church are both in full support of the project and believe the HLF program can make an impact on the members. Prior to implementation, there has been an increase in the members' interest and support of the HLF program indicating their willingness and readiness for change toward a healthier life. As mentioned prior, WGIC holds annual health education fairs and since inception, these health education fairs have not been assessed or evaluated to determine if the education obtained by the members are being effectively applied daily or if any positive outcomes have been achieved. The HLF program may be sustained by WGIC to continually evaluate the members' educational level as well as motivate and ensure positive attitudes and actions toward obtaining and maintaining a healthier life. As a Bible believing institution, WGIC can encourage the members to continue the HLF program as this venture may be one of the strategies in assuring the preservation and sustainability of a good, fit, well-kept, and healthier body, which is the temple of God.

Anticipated Barriers. An important barrier to consider is sustainability. Overcoming this barrier requires a collaborative effort by the participants and the facilitator of the program. The ability to fully commit and comply to the education provided in the HLF program will require discipline and frequent reminder. The participants will need discipline to adhere and faithfully maintain a healthy diet rich in good protein, fruits and vegetables, carbohydrates and fats; engage in at least 150 minutes of physical activity weekly; obtain about six to eight hours of sleep daily; acquire healthy stress management skills such as reading, physical activity, and meditation; as well as adhere to prescribed medications for the four week duration of the project as well as lifetime. HLF material containing a summary of the education provided will be distributed to the participants and encouraged to be occasionally reviewed as a reminder and a helpful tool.

Another challenge may be lack of understanding and collaboration among the HLF program director and participants. Lack of communication, miscommunication, and misunderstanding can play a major role in fully and accurately implementing the education provided on a daily basis for the proposed length of time. Effective communication between the HLF program director and participants will be highly emphasized. Questionnaires will be provided to the participants to ensure understanding of the project as well as the expectations required.

Facilitators to Implementation. The facilitators to implementing the program may include the various professionals that will assist in executing the program as well as contribute to providing education during the health education fair. The facilitators will be required to sign a nondisclosure agreement in compliance with HIPAA regulations to protect the rights and privacy of the participants personal health information (see appendix L). There will be a representative to greet and register the members as well as distribute written consents, HLF questionnaires,

educational materials, and folders. There will also be the program director who will introduce the program, expound on the essence, need, methodology, and expectation. The director of WGIC health ministry will be there to assist the HLF director in facilitating the education session and activities of the day. The HLF program director and WGIC health ministry director will work collaboratively to answer and address any concerns that may be presented. There will also be representatives in the healthcare field such as a pharmacist, registered nurse, and public health specialist who will expound and further educate the importance of the HLF program on an individual's and the community's overall health. There will be two additional personnel. One person will obtain the participants' height and weight on the initial day as well as the completion of the program; and the other person will assist by engaging the participants in half an hour of physical activity to demonstrate indoor exercise routines. The program director and two other personnel will be mainly involved in the weekly and biweekly reminders and reiteration of the HLF education. Everyone will be required to sign a nondisclosure agreement form protecting the privacy of the participants.

Risks and/or Unintended Consequences. Potential risks include level of commitment to the project as well as lack of collaboration by both participants and team members. The goal of this program must be well communicated, by explaining and clarifying every detail to ensure proper understanding and discipline for the entire duration of the project. Effective communication and collaboration among team members must be reinforced to assure success. Other risks may include withdrawal from the project once members obtain knowledge of the program's duration or the requirements associated. Another unintended consequence will be demand and pressure on participants interested in seeing a successful result throughout the four weeks. Participants may spend more money buying healthy foods than usual. Participants may

also devote more time to physical activities than they normally would. Though this is part of the goal of the study, it may be an unintended consequence on the part of the participants.

#### **Cost Factors**

Cost factors and budgetary needs for the Healthy Lifestyle Forever program will be very minimal with a significant cost savings associated with implementation. The cost factors may be classified in monetary, resources, and time. There is no anticipated excessive monetary cost for the HLF program except for stationery items that would be used for education and documentation purposes. Considering printing cost for flyers, brochures, questionnaires, log in sheets, and folders, an estimated \$100 may be incurred for entire the project. Approximately \$50 will be allocated toward purchasing ink for the printer to print the flyers, forms, and other necessary materials. An estimate of about \$40 will be directed toward the purchasing of plain white printing paper, and about \$10 will be used for purchasing folders and pens to be used for the program. Unfortunately, this monetary value for this project will not be funded by anyone as the resources and production of these handouts will be obtained from personal property.

The pastor of WGIC has graciously donated and permitted one of the rooms in the church building consisting of chairs, tables, and a writing board to be used for this project. Therefore, there will be no cost associated with renting a place to conduct this project. However, after further inquiry from other facilities, an estimated \$250 to \$600 should be allocated to rental cost for four hours on the initial day of the health education fair. A minimum of about \$125 to \$300 may also be necessary for the two hours required for the final evaluation and debriefing with participants. It is important that inquiries from personally known venues such as church, community club houses, and social organizations are done to receive free access to the facility or discounted prices for the duration of time needed.

Although there is no rental cost and minimal monetary cost attributed with the HLF program, there will be significant timely cost that will be incurred. Majority of the time will be invested in the planning and preparation prior to the program. A minimum of five hours per week will be required from the team to develop and organize the flyers, educational materials, daily log sheets, and questionnaires as well as plan the order of activity for the day. The entire team will be required to invest four hours on the actual day to facilitate the program and educate the members. A minimum of two hours per week will be required from the program director to contact the participants and follow up on the changes in lifestyle activities, reiterate the HLF education, and answer any questions or concerns available. It is essential to note that the facilitators of the HLF program offered services and time voluntarily to assist in this project, therefore there was no physical money allotted. However, depending on the location of the project, an estimated \$40 to \$70 per hour may be earned by the pharmacist; \$30 to \$55 per hour for the director of the health ministry; \$25 to \$50 per hour by the registered nurse; \$20 to \$40 per hour for the public health specialist; \$12 to \$17 per hour for the receptionist; and about \$5 to \$10 per hour for the other assisting personnel.

The HLF program is mainly sponsored by donations and volunteers. Although, there is no monetary costs associated with the HLF project, estimates have been illustrated to provide a description of how much supplies and facility rental may cost as well as how much the facilitators may earn for the services rendered.

#### **Chapter IV: Results**

# **Analysis of the Implementation Process**

The implementation process of the HLF program was very challenging as processes had to be altered and modified because of the Coronavirus Disease 2019 (COVID-19) pandemic. Implementation of the health education fair was intended to be a four hour long, in-person interactive session. The process required participants to complete consent and pretest forms upon arrival and prior to the start of the education session to ensure participation in the project as well as assess level of knowledge on healthy lifestyle before education was received. Education was supposed to be provided, with contributions, feedback and a more in-person interaction.

Participation in low to moderate physical activity was also expected to occur if time permitted to provide examples of different physical activities and exercises that can be performed both indoor and outdoor depending on one's functional capability. Participants would have completed the post-test questionnaire, mid-program, and post program evaluations immediately following the health education fair session, in the middle of the program and at the completion of the program, respectively.

Due to the COVID 19 pandemic and the mandated social distancing policy, implementation of the Healthy Lifestyle Forever program commenced with a three-hour health education seminar that was held virtually via Zoom on May 23, 2020. The four weeks long program completed on June 20, 2020. However, due to the delay in electronic submission of responses, an additional three weeks was apportioned to the participants to submit all questionnaire responses. The pre-test, post-test, mid-program, and post-program evaluation forms were collected from each participant and were analyzed to assess participants' level of education, knowledge, and understanding of living a healthy life as well as the efficacy of the

program. Participants who met the inclusive criteria and were qualified to participate in the HLF program were adults ages 18 years old and above, both men and women, and members of WGIC that showed interest and willingness to make a modification in lifestyle and improve overall health.

The HLF Health Education Fair was held on May 23, 2020 virtually via Zoom. Initially, 37 adult men and women, ages 18 years and older, and from both WGIC, Baltimore, Maryland, and other areas such as Connecticut. Even though the program was originally advertised to members of WGIC, participants outside joined the education session due to word of mouth from family members or friends. Thirty-two participants remained through the entire three-hour education fair. After screening through the inclusion criteria and completion of consent forms, 27 participants enrolled in the HLF program for the four weeks duration. Of the participants that enrolled, 23 of them completed the entire duration of the program and submitted all the responses to the various questionnaires. These participants completed and returned consent forms, pretest, posttest, mid-program, and program completion evaluation forms from the beginning to the end of the program. Therefore, the sample whose data was collected and analyzed was n=23.

Timing was a major factor of this project. The healthy lifestyle education fair was intended to be a four hour in-person interactive session, however, changes made to comply to COVID-19 regulations resulted in a three-hour virtual seminar. Additionally, the project, which was supposed to be completed in four weeks, required accommodations such as extension of time for submission of responses. An additional three weeks were allocated to participants after the end of the program to complete and return all required forms electronically using Google forms. The additional time was added in response to alterations in participants' schedules and

lives as a result of the pandemic. One of the lessons learned during this implementation process is that occasional reminders are necessary when dealing with people regarding a matter, as people's priorities are very different. What is valuable and of great essence to one person is completely different from that of the other. Another lesson is the changes in implementation of a project that can occur due to unforeseen factors on personal, social, and national levels.

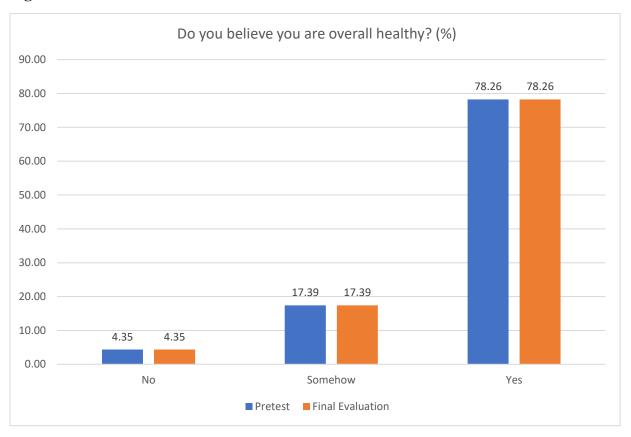
#### **Analysis of Project Outcome Data**

Qualitative and quantitative data were collected using questionnaires completed via google forms to evaluate positive and healthy lifestyle behavioral changes in the participants from within a four-week program. The variables used to evaluate the efficacy of the HLF program include, but not limited to, participants' self-evaluation of overall health status, dietary choices, drink choices, physical activity, sleep habits, level of spiritual life, and stress coping skills. Microsoft Excel spreadsheet and Chi-square test of association was used to analyze the data to determine whether the participant's responses changed after participation in the program. Descriptive statistics, pie charts, and bar graphs were also used in this analysis. Statistical significance is illustrated by a *p-value* of less than 0.05, therefore, the results revealed no significant difference in the distribution of responses.

Figures 1 through 7 compare the changes in these lifestyle behaviors from the beginning to the end of the HLF program. The data shows participants demonstrated positive behaviors in certain areas such as physical activity, dietary choices, drink choices, stress management, and spiritual level (figures 2, 4, 5, 6, and 7) and no change in belief of overall healthy and sleep habits (figures 1 and 3). Some of the lifestyle behaviors exhibited some positive or healthy lifestyle changes in certain areas, however, these differences were not large enough to be considered statistically significant (tables 1, 2, 3, 4, 5, 6, and 7).

Furthermore, participants' knowledge and understanding of the program was evaluated by their responses to the purpose and significance of ensuring a healthy lifestyle at the end of the education fair (figures 8 and 9).

Figure 1

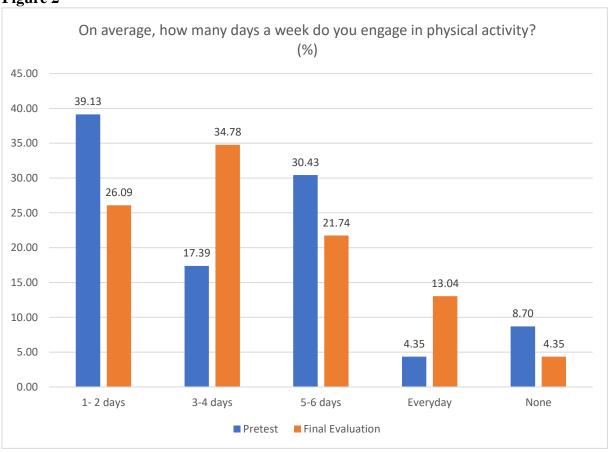


**Table 1.** Question One

	Do you believe that you are overall healthy?				
	Yes	No	Somehow	Don't know	<u>Total</u>
Pretest	18	1	4	0	23
Posttest	18	1	4	0	23
Total	36	2	8	0	46

 $X^2=0.000$ , p=1.000

Figure 2



**Table 2.** Question Two

	On average, ho	ow many days a weel	k do you engag	e in phys	ical activity	?
Question-2	1- 2 day	3-4 days	5-6 days	Every	yday None	Total
Pretest	9	4	7	1	2	23
Posttest	6	8	5	3	1	23
Total	15	12	12	4	3	46
$X^2 = 3.600, p$	o=0.463					

Figure 3

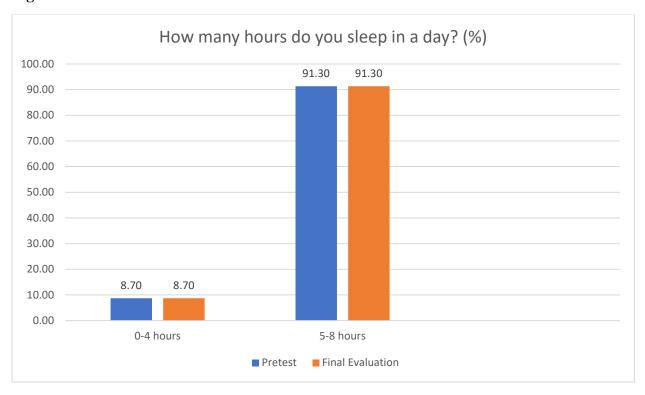
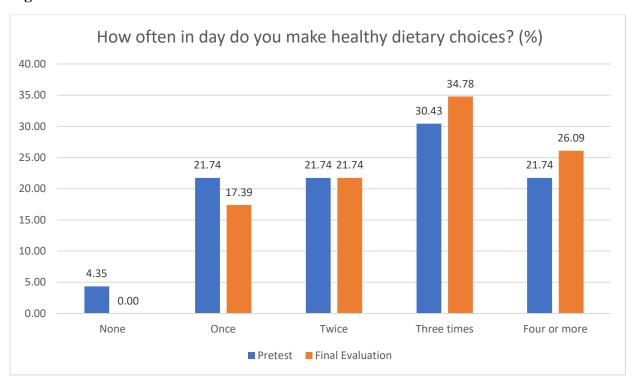


Table 3. Question Three

<u>I</u>	How many hours do you sleep in a day?					
Quesiton-3	0-4 hours	5-8 hours	Total			
Pretest	2	21	23			
Posttest	2	21	23			
Total	4	42	46			
$X^2=0.000, p=$	1.000					

Figure 4

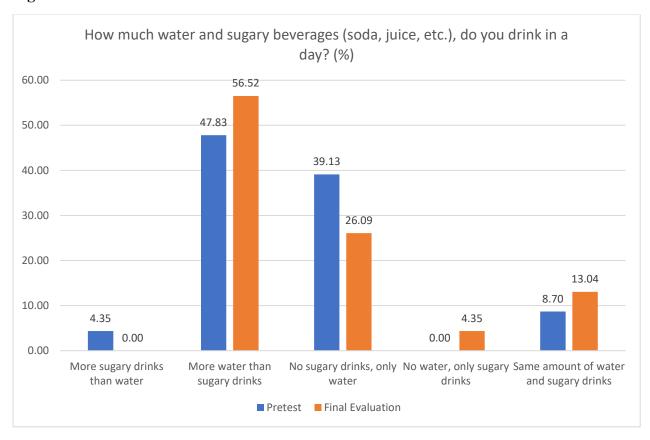


**Table 4.** Question 4

	How of	ten in da	ay do you mal	ke healthy die	tary choices?	
Question-4	None	Once	Twice	Three times	Four or more	Total
Pretest	1	5	5	7	5	23
Posttest	0	4	5	8	6	23
Total	1	9	10	15	11	46

X<sup>2</sup>=1.269, p=0.867

Figure 5



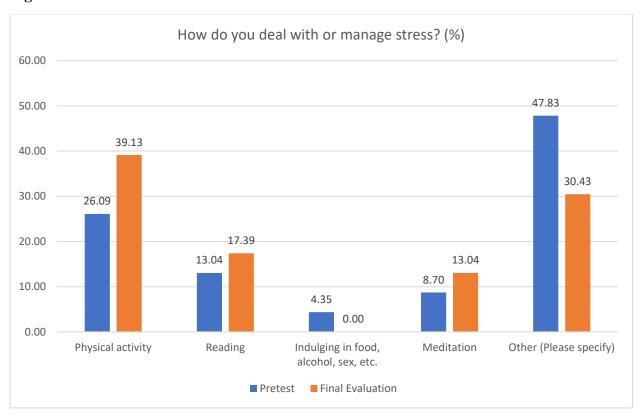
**Table 5.** Question 5

How much water and sugary beverages (soda, juice, etc.), do you drink in a day?

Question-	More sugary	More water	No sugary	No water,	Same amount of	
5	drinks than	than sugary	drinks, only	only sugary	water and sugary	Total
	water	drinks	water	drinks	drinks	
Pretest	1	11	9	0	2	23
Posttest	0	13	6	1	3	23
Total	1	24	15	1	5	46

 $X^2=2.967$ , p=0.563

Figure 6



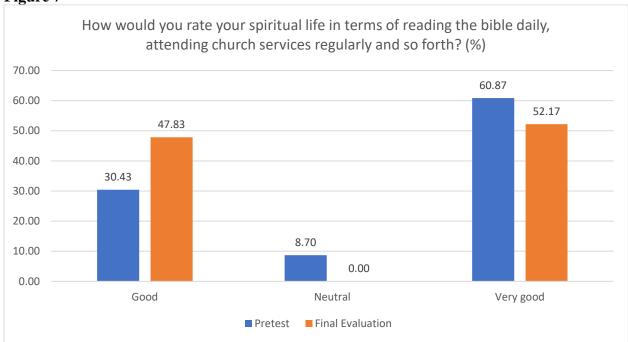
Note: "Other" refers to a combination of two more of the above-mentioned factors – physical activity, reading, meditation, and indulging in food, sex alcohol, etc.

Table 6. Question 6

	How do	you deal witl	h or mana	age stress?		
Question-6	Indulging in food, alcohol, sex, etc.	Meditation	Other (Please specify)	Physical activity	Reading	Total
Pretest	1	2	11	6	3	23
Posttest	0	3	7	9	4	23
Total	1	5	18	15	7	46
$X^2 = 5.943$ , p	p=0.654					

Note: "Other" refers to a combination of two more of the above-mentioned factors – physical activity, reading, meditation, and indulging in food, sex alcohol, etc.

Figure 7

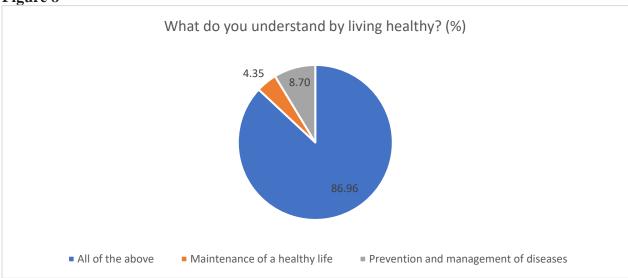


**Table 7.** Question 7

How would you rate your spiritual life in terms of reading the bible daily, attending church services regularly and so forth?

Question-	Good	Neutral	Very good	Total
Pretest	7	2	14	23
Posttest	11	0	12	23
Total	18	2	26	46
$X^2=3.043$ , p=0.2	218			

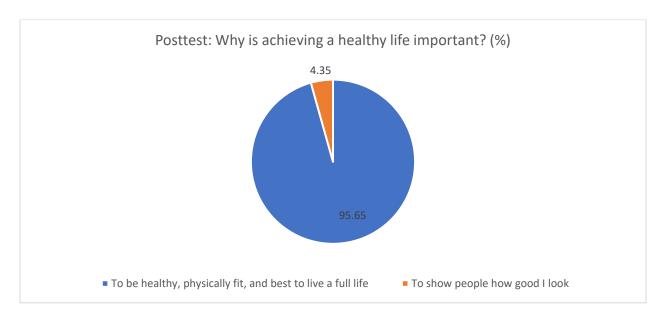
Figure 8



Evaluation of participants' knowledge and understanding of the program after completion of health education session.

.

Figure 9



Evaluation of participants' knowledge and understanding of the purpose program after completion of the health education session.

#### **Chapter V: Discussion**

#### **Major Findings Linked to SMART Objectives**

#### Objective One

The first objective of the HLF program was to assess individuals' knowledge and understanding of the program. This will be measured by at least 95% of the participants' ability to correctly respond to understanding of healthy living and significance of ensuring a healthy lifestyle on both the pre-test questionnaire as well as the post-test questionnaire by the end of education fair. The first half of the objective related to participants' understanding of healthy living was not met. This was evidenced by 86.96% of participants' responses as compared to 91.30% that correctly expressed understanding of healthy living prior to the education session. Moreover, the second half of this objective was met; 95.65% of the participants correctly responded to the significance of ensuring a healthy lifestyle as compared to all the participants correctly responding prior to the education fair.

#### Objective Two

The second objective of the HLF program focused on increasing positive changes in behavior related to healthy lifestyle participation as evidenced by one or more positive health changes in physical activity and diet documented by at least 50% of the participants on the mid-program evaluation form by the end of week two. This objective was met. Survey results revealed 95.65% of participants were involved in increased physical activity of one or more days a week by mid-program evaluation as compared to the pretest results of 91.30% participants that were involved in physical activity of one or more a week. In addition, 100% of participants made healthy dietary choices of one or more times in a day by mid program as compared to the pretest results of 95.65% participants that made one or more healthy dietary choices daily.

#### Objective Three

The third objective focused on achieving a participation rate of 75% of the participants' modification of their lifestyle through diet and physical activity documented on the final evaluation form by the end of week four. This objective was met. By the completion of the program, 95.65% of the participants engaged in one or more days of physical activity per week as compared to 91.30% of participants in the pre-test phase. Additionally, 100% of the participants made one or more healthy dietary choices daily as compared to 95.65% in the pre-test evaluation phase.

#### Limitation

There are few limitations involved with this project plan. The small sample size and inconsistency in the response and submission of the questionnaires may have influenced the overall results of this project. There were participants who completed and submitted questionnaires in the earlier stages of the program, but failed to complete and submit either the mid-program or final evaluations. Four out of 27 participants failed to complete the entirety of the program; therefore, responses from 23 participants were used for analysis. The existence of COVID-19 pandemic impacted the project by limiting participants' complete involvement in the project. Participants identified that they were overwhelmed with distant schooling of children, working from home, or having to overly work due to the COVID-19 surge.

#### **Deviations from Project Plan**

Several deviations occurred with the project plan. There was a delay with the implementation of the project as well as other factors that influenced the implementation of the project. The anticipated start date of the HLF program was postponed several times due to instances affecting Institutional Review Board approval of the project as well as the COVID-19

pandemic that affected the lives of individuals as well as systems and organizations. The mandatory social distancing and banning of social gatherings impacted the implementation of this project. The setting of the HLF program had to be moved from the physical location, that is the church, to an online setting via Zoom. The in-person health education fair had to be transformed to a virtual seminar. Methodology and processes regarding the project plan were modified to accommodate virtual learning and interaction. Due dates for submission of responses were extended as participants were emotionally, physically, psychologically, and financially affected by the COVID-19 and may have been unable to respond by the set deadlines. Access to outdoor activities, healthy food, and other resources were influenced due to city, state, and national mandates of curfews and closures. Participants that are members of a gym had to seek alternative avenues to exercise. Others were unable to leave home due to the fear of contracting the virus while outdoors. Lives, health, work, and resources of individuals, as well as systems and organizations, were significantly affected.

#### **Implications**

Further projects and development are necessary to promote continuity and improvement of the HLF program. How can participants be motivated to continue making healthy lifestyle choices? What assurances are available to hold participants accountable for making healthy lifestyle decisions? How frequently must the HLF program be conducted to ensure current evidenced based education and practices are being implemented to promote healthy living? How can the program attract individuals that do not already practice a healthy lifestyle?

#### Implications for the Organization and Sustainability

Consistency in the organization as well as reiteration of HLF health education must be addressed. HLF program is now under the possession of WGIC and can be incorporated into

future health education sessions. As a member of WGIC's health ministry, I will ensure the HLF program is included in future health education fairs. The program can also be extended outside the walls of WGIC. The frequency of offering the HLF program should be considered as the church may have other activities or programs as well. Additional educational topics pertaining to the overall health of individuals may also be incorporated into future educational sessions. Sustainability of the program includes organizing HLF programs at least quarterly. Due to the current circumstance of COVID-19 circulating the world and the specific mandates accompanying, the program can be held virtually via Zoom. However, once the ban of social distancing is lifted, two of these quarterly programs can be mini health education fairs held virtually via Zoom, while the other two, which could be considered the main sessions are held at the facility. Implementation of frequent follow-ups and reiterations of maintaining a healthy lifestyle as well as addressing feedback provided by the participants must be considered for the subsequent educations. Ways of motivating and encouraging people to get involved, commit, and comply to the program should also be addressed.

#### Implications for Practice Change

Several practice changes can be made to improve the HLF program as well as increase awareness and education for the participants. Emphasis on the proposed sustainability of organizing the HLF program four times a year should be considered. Representatives such as healthy lifestyle coaches, physical activity trainers, dieticians, mental health professionals, nurses, pharmacists, and doctors could be invited to share and expand on the essence and methods of living a healthy lifestyle. Newsletters can announce the date of the next program event, invited guests, success stories, etc. Additionally, participants and families could receive education on substituting certain nutrition due to allergies, dislikes, access, and affordability.

Enrollment in a nearby gym, motivation by friends, and family's involvement in daily physical activities should be encouraged. Healthy ways of managing stress, increasing spiritual level as well as ensuring at least six to eight hours of sleep daily, should be provided for participants overwhelmed with stress, are not spiritually active, and lack adequate sleep. Self-evaluation and inquiries from health care providers regarding healthy living should be made and encouraged. This education includes, but not limited to understanding BMI and laboratory values and interpretations, as well as the impact of certain lifestyle changes on current medical conditions and reduction of polypharmacy. Individuals who do not currently practice healthy living should be targeted to participate in the HLF program.

#### Implications for Future Research

The HLF program consists of various factors such as nutrition, physical activity, sleep habits, stress management, and spiritual life development that were addressed to assist in obtaining and maintaining a healthy lifestyle. However, there is always room for improvement even in these areas. Future research could include a randomized control study on the effect of healthy lifestyle modification on the overall health of adults in an inner-city church over a period of six months or longer comparing individuals that received more frequent education to those that received less frequent education. Additional research could include a quality improvement study on the effect of healthy lifestyle modification on the overall health of children and adolescents in an inner-city church over a period of one year.

Obesity is still on the rise affecting people that do not engage in a healthy lifestyle. The membership of WGIC includes of adults and children. Studies have shown that children are also at risk for obesity, which may persist through adulthood resulting in imminent morbidities and mortalities. Providing education on healthy lifestyle modifications and implementing these

actions during the early ages of individuals can contribute to the prevention of diseases, maintenance of a healthy life and reduction of comorbidities, complications, and fatalities both at a younger age and adulthood. Healthy lifestyle requires discipline, determination, and devotion, which should be initiated and instilled from childhood.

#### Impact on Nursing

One of the essential roles of nurses is providing education. Education is an important key in preventing diseases, maintaining a healthy life, and reducing comorbidities and complications. Ability to obtain appropriate and adequate evidence-based knowledge and practices to impute on and impart on others is very critical. Opportunities such as hospital or office visits, health fairs, and community-based activities should be taken advantage of by nurses and other health care professionals to promote and educate others on healthy lifestyle behaviors. Education for instance, could include making healthy dietary choices, accesses, resources, and preparation of healthy meals while on a limited budget or during financial hardship. Healthy and nutritious foods may be costly. Education on how to select healthy foods and access such foods on limited finances, such as obtaining from local farmers' markets and growing one's own produce, should also be provided. Furthermore, education on physical activity, sleep habits, stress management, alcohol and smoking cessations, and appropriate screenings could also be reiterated during office visits or prior to discharge. Benefits of healthy lifestyle and complications of the lack thereof, as well as early detection of mental health disorders and acquisition of resources and referrals, should also be evaluated and re-enforced.

#### Implications for Health Policy Change

Stake holders such as local, state, federal and non-governmental agencies have adopted holistic approaches to promote healthy lifestyles. This has and is continuously being done

through increase in funding to promote awareness and provide resources for healthy lifestyle in the general population. Some places of work, schools, organizations and even churches have incorporated healthy lifestyle measures and provided resources to assist individuals in engaging and obtaining an overall healthy life.

#### **Chapter VI: Conclusion**

#### Value of the Project

The HLF program was very valuable to the organization and members. Obesity is of a great concern globally, nationally, and locally. Organizations such as the World Health Organization, American Heart Association, and state of Maryland Department of Health and Human Resources have acknowledged the existence of obesity and the increase in incidence. Although certain national health goals and objectives via healthy people 2020 have been set, there is still more work ahead. Early identification and implementation of healthy lifestyle choices will allow promotion and maintenance of a healthy life as well as reduction and prevention of comorbidities and complications.

The HLF program was established to improve a pre-existing health education for members at an inner-city church in Baltimore, Maryland. The program targets members of WGIC, male and female above the age of 18 years old. The HLF program provides education on living and incorporating a healthy lifestyle daily. Education regarding nutritional choices and habits, appropriate physical activity for all ages above 18 years of age, healthy sleep habits, healthy stress management, early identification of mental health disorders, and improvement of spiritual health. The HLF program also follows up periodically to ensure accountability as well as provide additional resources and assistance necessary.

Education on healthy lifestyle should be the responsibility of the individual as well as health care professionals. Individuals should be made aware of the implications of a healthy lifestyle and the lack thereof on overall health. Health care professionals should also address BMI changes, and new or unexpected findings in examinations and laboratory values with

patients. Education on measures to improve these findings to prevent development or worsening of health disparities must be provided.

#### **DNP Essentials**

The American Association of Colleges of Nursing (AACN, 2006) established the Essentials of Doctoral Education for Advanced Nursing Practice. Eight essentials were developed as guidelines to achieve within the doctoral degree academic structure. During the processes of this project development and implementation all eight essentials were demonstrated. Essential I: Scientific Underpinnings for Practice was demonstrated by using the conceptual or theoretical framework, Health Belief model to guide, implement, and achieve a quality improvement processes and analysis that was appropriate for the project. Essential II: Organizational and Systems Leaderships for Quality Improvement was demonstrated by collaborating with mentors and leaders of WGIC to develop effective strategies and budgetary costs necessary for the project. Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice were included in this project by critically appraising literatures, applying findings from evidence-based research, and designing implementation and evaluation processes to improve effective patient care and health care outcomes through lifestyle modifications. Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care was demonstrated by gaining understanding of the importance of healthcare information systems to record, compute, and analyze patient records and healthcare outcomes as well as develop evaluation tools to assess, monitor, and evaluate the effectiveness of the lifestyle modification program. Essential V: Health Care Policy for Advocacy in Health Care was demonstrated by educating and influencing policy makers at the facility as well as demonstrating leadership in the development of procedures to

attain and improve current health care status as well as overall health outcomes. Essential VI: Inter-Professional Collaboration for Improving Patient and Population Health Outcomes was demonstrated by effectively communicating and collaborating with the team such as mentors and instructor regarding the HLF project and the specific information and ways to ensure success of the project. This information included, but is not limited to, the importance of consent forms, pre and posttest questionnaires, lifestyle education, as well as ensuring the participants' awareness of the importance of this program on their overall health.

Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health was demonstrated by evaluating care delivery strategies and possible interventions such as through the development of health assessment questionnaires, education materials, and evaluation tools to improve patient's health status and promote wellbeing through lifestyle modification.

Essential VIII: Advanced Nursing Practice was demonstrated by developing and sustaining therapeutic relationships with the stakeholders such as the pastor of WGIC, my mentors, and instructors whereby I was able to utilize advanced levels of clinical judgement to inform and educate them on evidence-based practices of promoting and maintaining healthy lifestyle.

#### **Plan for Dissemination**

The findings from this project will be disseminated to Bradley University via PowerPoint and the DNP e-repository as part of the DNP program requirements to ensure all requirements are met prior to completion of the program. The findings will also be disseminated to WGIC via a PowerPoint presentation. This is to increase awareness of healthy lifestyle habits and encourage members to take initiative, improve or continue implementing or modifying lifestyle measures for an overall healthy, safe, and quality life. Educating members on the essence and benefits of a healthier life regarding modifications in dietary choices, physical activity, adequate

sleep, stress management, and spiritual growth are vital for improvement of overall physical and spiritual health.

#### **Attainment of Personal and Professional Goals**

The personal and professional goals attained throughout this project are indispensable. The ability to effectively communicate a pertinent concern; collaborate with others on developing a successful project; organize and implement the project; and overcome barriers and challenges that arise is a great accomplishment. Throughout this process, helpful health education and healthy lifestyle measures were provided and results were demonstrated; weaknesses in communicating, planning, collaborating, leadership, and use of technology were strengthened; and feedbacks were received on the impact of the project on individuals' lives as well as the need to continue conducting the HLF project. Living a healthy life is a crucial aspect in the success of one's wellbeing. This project made it possible for people's lives to be impacted in a positive way.

#### References

- American Association of Colleges of Nursing (AACN). (2006). The essentials of doctoral education for advanced nursing practice.
  - http://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf
- American Heart Association. (2018). *How much physical activity do you need?*<a href="https://www.heart.org/en/healthy-living/fitness/fitness-basics/aha-recs-for-physical-activity-infographic">https://www.heart.org/en/healthy-living/fitness/fitness-basics/aha-recs-for-physical-activity-infographic</a>
- Arab, A., Askari, G., Golshiri, P., Feizi, A., Hekmatnia, A., Iraj, B., & Nourian, M. (2017). The effect of modification education on adiposity measures in overweight and obese nonalcoholic fatty liver disease patients. *International Journal of Preventive Medicine*.

  <a href="http://www.ijpvmjournal.net/article.asp?issn=2008-7802;year=2017;volume=8;issue=1;spage=10;epage=10;aulast=Arab">http://www.ijpvmjournal.net/article.asp?issn=2008-7802;year=2017;volume=8;issue=1;spage=10;epage=10;aulast=Arab</a>
- Baillot, A., Romain, A.J., Boisvert-Vigneault, K., Audet, M., Baillargeon, J.P., Dionne, I.J., Valiquette, L., Chakra, C.N.A., Avignon, A., & Langlois, M.F. (2015). Effects of lifestyle interventions that include a physical activity component in class II and III obese individuals: A systematic review and meta-analysis. *PLoS ONE*, 10(4): e0119017. <a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0119017">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0119017</a>
- Baltimore City Health Department. (2017). Community health assessment: Baltimore city.

  <a href="https://health.baltimorecity.gov/sites/default/files/health/attachments/Baltimore%20City%20CHA%20-%20Final%209.20.17.pdf">https://health.baltimorecity.gov/sites/default/files/health/attachments/Baltimore%20City%20CHA%20-%20Final%209.20.17.pdf</a>
- Boston University. (2018). *Health belief model*. <a href="http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories2.html">http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories2.html</a>

- Burgess, E., Hassmén, P., & Pumpa, K.L. (2017). Determinants of adherence to lifestyle intervention in adults with obesity: A systematic review. *Clinical Obesity*. 7. 123–135. <a href="https://doi.org/10.1111/cob.12183">https://doi.org/10.1111/cob.12183</a>
- Buttaro, T.M., Trybulski, J., Polgar-Bailey, P., & Sandberg-Cook, J. (2017). *Primary care: A collaborative practice*. (5th ed.). Elsevier.
- Centers for Disease Control and Prevention (CDC). (2018). *Adult obesity facts*. <a href="https://www.cdc.gov/obesity/data/adult.html">https://www.cdc.gov/obesity/data/adult.html</a>
- Centers for Disease Control and Prevention (CDC). (2019). *Overweight and obesity: Community efforts*. https://www.cdc.gov/obesity/strategies/community.html
- Craemer, K.A., Sampene, E., Safdar, N., Antony, K.M., & Wautlet, C.K. (2019). Nutrition and exercise strategies to prevent excessive pregnancy weight gain: A meta-analysis.

  \*American Journal of Perinatology Reports 9(01): e92-e120. <a href="https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0039-1683377">https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0039-1683377</a>
- Crump, C., Sundquist, J., Winkleby, M.A., & Sundquist, K. (2016). Interactive effects of physical fitness and body mass index on the risk of hypertension. *JAMA International Medicine*. 176(2): 210-216.

  https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2482349
- Dall, T. M., Storm, M. V., Semilla, A. P., Wintfeld, N., O'Grady, M. O., & Venkat-Narayan, K. M. (2015, March 01). Value of lifestyle intervention to prevent diabetes and sequelae.
  American Journal of Preventive Medicine, 48(3), 271-280.
  <a href="https://doi.org/10.1016/j.amepre.2014.10.003">https://doi.org/10.1016/j.amepre.2014.10.003</a>
- Glanz, K., Rimer, B.K., & Viswanath. K. (2015, June 17). *Health behavior: Theory, research, and practice.*

https://books.google.com/books?hl=en&lr=&id=PhUWCgAAQBAJ&oi=fnd&pg=PA75
&dq=health+belief+model&ots=drOiOEdED&sig=9AEqKG9oYbsE1JXIU0KdXbFceJ4#v=onepage&q&f=false

Hales, C.M., Carroll, M.D., Fryar, C.D. & Ogden, C.L. (2017). Prevalence of obesity among adults and youth: United States, 2015-2016.

https://www.cdc.gov/nchs/data/databriefs/db288.pdf

- Healthline. (2015). 6 Health risks of being underweight.

  https://www.healthline.com/health/underweight-health-risks#next-steps
- Henry, T.A. (2018). *Adult obesity rates rise in 6 states, exceed 35% in 7*. <a href="https://www.ama-assn.org/delivering-care/public-health/adult-obesity-rates-rise-6-states-exceed-35-7">https://www.ama-assn.org/delivering-care/public-health/adult-obesity-rates-rise-6-states-exceed-35-7</a>
- Ibrahim, N., Ming Moy, F., Awalludin, I. A., Mohd Ali, Z., & Ismail, I. S. (2016). Effects of a community-based healthy lifestyle intervention program (Co-HELP) among adults with prediabetes in a developing country: A quasi-experimental study. *PloS One*, *11*(12), e0167123. https://doi.org/10.1371/journal.pone.0167123
- Jane, M., Hagger, M., Foster, J., Ho, S., Kane, R., & Pal, S. (2017). Effects of a weight management program delivered by social media on weight and metabolic syndrome risk factors in overweight and obese adults: A randomised controlled trial. *PLoS One*, *12*(6), e0178326. <a href="https://pubmed.ncbi.nlm.nih.gov/28575048/">https://pubmed.ncbi.nlm.nih.gov/28575048/</a>
- Joiner, K. L., Nam, S., & Whittemore, R. (2017). Lifestyle interventions based on the diabetes prevention program delivered via eHealth: A systematic review and meta-analysis.

  \*Preventive Medicine\*, 100, 194–207. <a href="https://doi.org/10.1016/j.ypmed.2017.04.033">https://doi.org/10.1016/j.ypmed.2017.04.033</a>

- LaMorte, W. (2019). The health belief model. *Boston University School of Public Health*.

  <a href="http://sphweb.bumc.bu.edu/otlt/MPH-">http://sphweb.bumc.bu.edu/otlt/MPH-</a>

  Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories2.html
- Marrero, D. G., Palmer, K. N., Phillips, E. O., Miller-Kovach, K., Foster, G. D., & Saha, C. K. (2016). Comparison of commercial and self-initiated weight loss programs in people with prediabetes: A randomized control trial. *American Journal of Public Health*, *106*(5), 949–956. https://doi.org/10.2105/AJPH.2015.303035
- Maryland Department of Health (2020). *Obesity*.

https://phpa.health.maryland.gov/ccdpc/healthy-lifestyles/Pages/obesity.aspx

- Moran, L. J., Noakes, M., Clifton, P., Buckley, J., Brinkworth, G., Thomson, R., & Norman, R. J. (2019). Predictors of lifestyle intervention attrition or weight loss success in women with polycystic ovary syndrome who are overweight or obese. *Nutrients*, *11*(3), 492. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6470873/
- Nyenhuis, S. M., Dixon, A. E., & Ma, J. (2018). Impact of lifestyle interventions targeting healthy diet, physical activity, and weight loss on asthma in adults: What is the evidence? *The Journal of Allergy and Clinical Immunology. In Practice*, *6*(3), 751–763. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5948112/
- Omenka, O. I., Watson, D. P., & Hendrie, H. C. (2020). Understanding the healthcare experiences and needs of African immigrants in the United States: a scoping review. *BioMed Central Public Health*, 20(1), 27.

  https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-8127-9

- Open Data Network. (2016). Health behaviors.
  - https://www.opendatanetwork.com/entity/0500000US24005/Baltimore\_County\_MD/heal th.health\_behaviors.adult\_obesity\_value?year=2015
- Pjanic, Müller, R., Laimer, M., Hagenbuch, N., Laederach, K., & Stanga, Z. (2017). Evaluation of a multiprofessional, nonsurgical obesity treatment program: Which parameters indicated lifestyle changes and weight loss? *Journal of Eating Disorders*, *5*(14). https://doi.org/10.1186/s40337-017-0144-4
- Shommu, N.S., Ahmed, S., Rumana, N., Barron, G.R.S., McBrien, K.A., & Turin, T.C. (2016).

  What is the scope of improving immigrant and ethnic minority healthcare using community navigators: A systematic scoping review. *International Journal for Equity in Health*, 15(6). https://doi.org/10.1186/s12939-016-0298-8
- Sun, Y., You, W., Almeida, F., Estabrooks, P., & Davy, B. (2017). The effectiveness and cost of lifestyle interventions including nutrition education for diabetes prevention: A systematic review and meta-analysis. *Journal of the Academy of Nutrition and Dietetics*, 117(3), 404–421.e36. https://doi.org/10.1016/j.jand.2016.11.016
- The State of Obesity. (2018). *The Healthcare Costs of Obesity*. https://www.stateofobesity.org/healthcare-costs-obesity/
- The State of Obesity. (2019). *The state of obesity in Maryland*.

  <a href="https://www.stateofobesity.org/states/md/">https://www.stateofobesity.org/states/md/</a>
- Trust for America's Health. (2018). *The state of obesity 2018*. https://www.tfah.org/releases/stateofobesity/
- Wang, J., Cai, C., Padhye, N., Orlander, P., & Zare, M. (2018). A behavioral lifestyle intervention enhanced with multiple-behavior self-monitoring using mobile and

connected tools for underserved individuals with type 2 diabetes and comorbid overweight or obesity: Pilot comparative effectiveness trial. *JMIR Mhealth Uhealth*. 6 (4): e92. <a href="https://mhealth.jmir.org/2018/4/e92/">https://mhealth.jmir.org/2018/4/e92/</a>

- Winning Grace International Church (WGIC). (2020). Winning grace international church.

  https://wgic.org/
- World Population Review. (2019). *Baltimore city, Maryland population 2019*. <a href="http://worldpopulationreview.com/us-cities/baltimore-population/">http://worldpopulationreview.com/us-cities/baltimore-population/</a>
- Yang, M.H., Kang, S.Y., Lee, J.A., Kim, Y.S., Sung, E.J., Ka-Young Lee, K.Y., ... Lee, S.Y. (2017). The effect of lifestyle changes on blood pressure control among hypertensive patients. *Korean Journal of Family Medicine*, *38*, 173-180. https://doi.org/10.4082/kjfm.2017.38.4.173

#### **APPENDIX A: IRB Approval Letter**



DATE: 28 APR 2020

TO: Catherine Imbeah, Maureen Hermann, Karin Smith

FROM: Bradley University Committee on the Use of Human Subjects in Research

STUDY TITLE: Effect of lifestyle modification education program among in inner-city church adult's

overall health

CUHSR #: 20-026-Q SUBMISSION TYPE: Initial Review

ACTION: Approved
APPROVAL DATE: 28 APR 2020
REVIEW TYPE: Quality Assurance

Thank you for the opportunity to review the above referenced proposal. The Bradley University Committee on the Use of Human Subject in Research has determined the proposal to be NOT HUMAN SUBJECTS RESEACH thus exempt from IRB review according to federal regulations.

The study has been found to be not human subject research pursuant to 45 CFR 46.102(i), not meeting the federal definition of research (not contributing to generalizable knowledge). Please note that it is unlawful to refer to your study as research. Noted that your modifications to the protocol in response to COVID 19 are accepted.

Your study does meet general ethical requirements for human subject studies as follows:

- 1. Ethics training of project personal is documented.
- 2. The project involves no more than minimal risk and does not involve vulnerable population.
- 3. There is a consent process that:
  - Discloses the procedures
  - Discloses that participation is voluntary
  - · Allows participants to withdraw
  - · Discloses the name and contact information of the investigator
  - Provides a statement of agreement
- 4. Adequate provisions are made for the maintenance of privacy and protection of data.

Please submit a final status report when the study is completed. A form can be found on our website at <a href="https://www.bradley.edu/academic/cio/osp/studies/cuhsr/forms/">https://www.bradley.edu/academic/cio/osp/studies/cuhsr/forms/</a>. Please retain study records for three years from the conclusion of your study. Be aware that some professional standards may require the retention of records for longer than three years. If this study is regulated by the HIPAA privacy rule, retain the research records for at least 6 years.

Be aware that any future changes to the protocol must first be approved by the Committee on the Use of Human Subjects in Research (CUHSR) prior to implementation and that substantial changes may result in the need for further review. These changes include the addition of study personnel. Please submit a Request for Minor Modification of a Current Protocol form found at the CUHSR website at <a href="https://www.bradley.edu/academic/cio/osp/studies/cuhsr/forms/">https://www.bradley.edu/academic/cio/osp/studies/cuhsr/forms/</a> should a need for a change arise. A list of the types of modifications can be found on this form.

While no untoward effects are anticipated, should they arise, please report any untoward effects to CUHSR immediately.

This email will serve as your written notice that the study is approved unless a more formal letter is needed. You can request a formal letter from the CUHSR secretary in the Office of Sponsored Programs.

# **APPENDIX B: Healthy Lifestyle Forever**

### **Authorization Form**

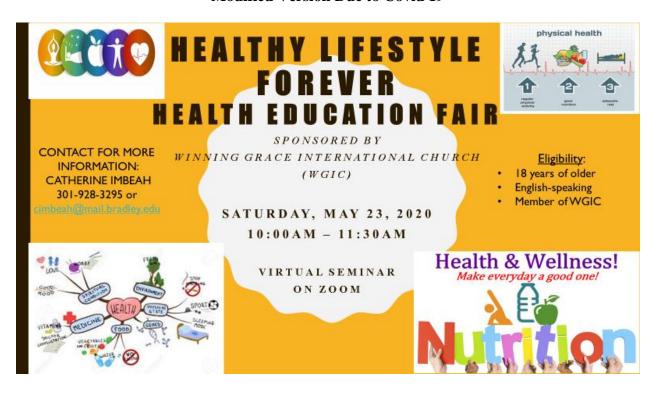
Grace the He with all everyo a health healthy follows	Authoriz  Dec 15, 2019  Authoriz  Dec 15, 2019  Authoriz  OSEL F. OSEL TUT  International Church (WGIC), herel  Ithy Lifestyle Forever (HLF) programmer to the complete in Christ and one of the	tation for Use of Facility  (first and last name), Bishop of Winning by authorize the use of the church and the members for ram. WGIC is a multinational and multicultural church in, women and children. WGIC's mission is to present it ways to achieve that is by ensuring our members live it is a body is the temple of God, therefore a strong and to carry out the great commission mandated to every	
Grace the He with all everyo a health healthy follows	Authorize	tation for Use of Facility  (first and last name), Bishop of Winning by authorize the use of the church and the members for ram. WGIC is a multinational and multicultural church in, women and children. WGIC's mission is to present is ways to achieve that is by ensuring our members live ical body is the temple of God, therefore a strong and	
Grace the He with all everyo a health healthy follows	Authorize  Authorize  SCAL F. OSE I Total  International Church (WGIC), herel  Ithy Lifestyle Forever (HLF) programment 150 members consisting of members complete in Christ and one of the complete in Christ and one of the complete in Christ and functional to the complete of Christ.	(first and last name), Bishop of Winning by authorize the use of the church and the members for ram. WGIC is a multinational and multicultural church in, women and children. WGIC's mission is to present is ways to achieve that is by ensuring our members live ical body is the temple of God, therefore a strong and	
Grace the He with all everyo a health healthy follows	Authorize  Authorize  OSEL F. OSEL TOTAL  International Church (WGIC), herel  Ithy Lifestyle Forever (HLF) program  out 150 members consisting of me  ne complete in Christ and one of the  ry life. It is our belief that the physic  body is equipped and functional to  r of Christ.	(first and last name), Bishop of Winning by authorize the use of the church and the members for ram. WGIC is a multinational and multicultural church in, women and children. WGIC's mission is to present e ways to achieve that is by ensuring our members live ical body is the temple of God, therefore a strong and	
Grace the He with al everyo a health healthy followe I am av	nternational Church (WGIC), herely the Lifestyle Forever (HLF) program to the complete in Christ and one of the y life. It is our belief that the physical body is equipped and functional to the of Christ.	(first and last name), Bishop of Winning by authorize the use of the church and the members for ram. WGIC is a multinational and multicultural church in, women and children. WGIC's mission is to present e ways to achieve that is by ensuring our members live ical body is the temple of God, therefore a strong and	
Grace the He with al everyo a health healthy followe I am av	nternational Church (WGIC), herely the Lifestyle Forever (HLF) program to the complete in Christ and one of the y life. It is our belief that the physical body is equipped and functional to the of Christ.	(first and last name), Bishop of Winning by authorize the use of the church and the members for ram. WGIC is a multinational and multicultural church in, women and children. WGIC's mission is to present e ways to achieve that is by ensuring our members live ical body is the temple of God, therefore a strong and	
Grace the He with al everyo a health healthy followe I am av	International Church (WGIC), herelable Lifestyle Forever (HLF) programmer 150 members consisting of members complete in Christ and one of the y life. It is our belief that the physiology is equipped and functional to a of Christ.	by authorize the use of the church and the members for ram. WGIC is a multinational and multicultural church in, women and children. WGIC's mission is to present it ways to achieve that is by ensuring our members live itial body is the temple of God, therefore a strong and	
Grace the He with al everyo a health healthy followe I am av	International Church (WGIC), herelable Lifestyle Forever (HLF) programmer 150 members consisting of members complete in Christ and one of the y life. It is our belief that the physiology is equipped and functional to a of Christ.	by authorize the use of the church and the members for ram. WGIC is a multinational and multicultural church in, women and children. WGIC's mission is to present it ways to achieve that is by ensuring our members live itial body is the temple of God, therefore a strong and	
the He with al everyo a healt healthy followe I am av	out 150 members consisting of me ne complete in Christ and one of the y life. It is our belief that the physi- body is equipped and functional to r of Christ.	ram. WGIC is a multinational and multicultural church n, women and children. WGIC's mission is to present e ways to achieve that is by ensuring our members live ical body is the temple of God, therefore a strong and	
a health healthy follows I am av	the complete in Christ and one of the y life. It is our belief that the physion body is equipped and functional to r of Christ.	e ways to achieve that is by ensuring our members live ical body is the temple of God, therefore a strong and	
a healthy follower I am av	y life. It is our belief that the physiology is equipped and functional to r of Christ.	ical body is the temple of God, therefore a strong and	
healthy follows I am av	body is equipped and functional to		
healthy follows I am av	body is equipped and functional to		
follows	r of Christ.		
	are the HLF program is an eight-w		
comme		week lifestyle modification program that will	
	nce on January 25, 2020 and end o	on March 21, 2020. The HLF program is intended to	
		ges that will aid participants obtain a healthy and	
		aid in the prevention of diseases, maintenance of a	
	lifestyle and reduction of comorbi		
		res and activities of the HLF program. On behalf of the	
		the HLF program. Full authorization and consent have	
		ch facility and members who volunteer as participants	
been gi	en to The Toy are use or are the	and the second s	

#### **APPENDIX C: Healthy Lifestyle Forever**

#### **Flyer**



#### **Modified Version Due to Covid 19**



## **APPENDIX D:** Heathy Lifestyle Forever

## **Registration Form**

Participant ID	Phone number	Email address

Information on this form will be collected and completed by an HLF program representative.

#### **APPENDIX E: Healthy Lifestyle Forever**

#### **Participant Consent Form**

You are invited to participate in a quality improvement project. The purpose of this project is to increase awareness on an already existing healthy living education as well as improve healthy lifestyle choices and behaviors in adults 18 years of age and older after attending a healthy lifestyle educational workshop. This project consists of attending a health fair education workshop, participating in low level physical activity, answering pre-and posttest questions as well as program completion evaluation form, and participating in a mid-program follow up. Your participation in this project will take approximately four weeks. Your participation in the project and the data collected will remain confidential as your personal information will be de-identified and alphanumerical values will be assigned. Taking part in this project is voluntary. You may choose not to take part or may leave the project at any time. You may choose to skip questions on the pre- and posttest questionnaires, mid-program survey, and evaluation. Your participation or non-participation will have no effect on your status as a member of Winning Grace International Church. At the conclusion of the project, the deidentified data would be used to improve sustainability plan and destroyed after a year. Questions about this project may be directed to the project leader in charge: Catherine Imbeah at 301-928-3295 or cimbeah@mail.bradley.edu. or the project advisor: Dr. Maureen Hermann at mhermann@bradledy.edu. You are voluntarily making a decision to participate in this project. By clicking "I Agree" below means that you have read and understood the information presented and have decided to participate. Your signature and submission also mean that all of your questions have been answered to your satisfaction. If you think of any additional questions, you should contact the project leaders.

I Agree	
	/
Printed Name (Participant)	Signature/Date
Email address	Phone number
	/
Printed Name (Investigator)	Signature/Date

# **APPENDIX F: Healthy Lifestyle Forever**

# **Daily Log Sheet**

Participant ID		Week/Date				
		E.g. Week #	(MM/DD/YYYY-MM/DI	D/YYYY)		
Sunday			Total calo	ries:		
Breakfast	Lunch	Dinner	Snacks			
Calories:	Calories:	Calories:	Calories:			
Water Intake	·	Phy	ysical Activity			
Sleep	_					
1	/bottles (oz)		_# of Mins	# of		
Monday			Total calories:			
Breakfast	Lunch	Dinner	Snacks			
Calories: Water Intake	Calories:	Calories:	Calories: ysical Activity			
1	/bottles (oz)	type	_# of Mins	# of		
Tuesday			Total calories:			
Breakfast	Lunch	Dinner	Snacks			
Calories:	Calories:	Calories:	Calories:			
Water Intake	Culoties.		ysical Activity			
Sleep			اعدا			
# of cups/ hours	/bottles (oz) L	type	_ # of Mins	# of		

Wednesday			Total calories:	
Breakfast	Lunch	Dinner	Snacks	
Calories:	Calories:	Calories:	Calories:	
Water Intake			vsical Activity	
Sleep	_	<u> </u>	·	
1	bottles (oz)	type	_# of Mins	# of
	e			
, , , , , , , , , , , , , , , , , , ,	~		E.g. Week # (MM/	DD/YYYY-
MM/DD/YYYY)				
Thursday			Total calories:	
Breakfast	Lunch	Dinner	Snacks	
Calories:	Calories:	Calories:	Calories:	
Water Intake	•	Phy	sical Activity	
Sleep	_		•	
-	bottles (oz)	type	_# of Mins	# of
hours			T-4-11	
Friday Breakfast	Lunch	Dinner	Total calories: Snacks	
Dreakrast	Lunch	Diffiner	Shacks	
Calories:	Calories:	Calories:	Calories:	
Water Intake	I		sical Activity	
Sleep	_		·	
# of cups/	bottles (oz)	type	# of Mins	# of
hours	C 3.11125 (02) L		01 1.11110	,, 01

Saturday			Total calories:	
Breakfast	Lunch	Dinner	Snacks	
Calories:	Calories:	Calories:	Calories:	
Water Intake		Physical Activity		
Sleep				
# of cups/bottles (oz)		type# of	f Mins# of	
hours				

# **APPENDIX G: Healthy Lifestyle Forever Pretest Questions**

Participant II	Pretest Questions Date:
Please answe	er these questions to the best of your ability.
1. Do yo	ou believe you are overall healthy?
•	Yes
b.	No
c.	Somehow
d.	Don't know
2. On av	verage, how many days a week do you engage in physical activity?
a.	None
b.	1- 2 days
	3-4 days
	5-6 days
e.	Everyday
3. How	many hours do you sleep in a day?
	None
	0-4 hours
	5-8 hours
	9-12 hours
e.	13 or more hours
4. How	often in day do you make healthy dietary choices?
a.	None
b.	Once
c.	Twice
d.	Three times
e.	Four or more
5. How	much water and sugary beverages (soda, juice, etc.), do you drink in a day?
a.	$\mathcal{E}^{\bullet}$
b.	
c.	Same amount of water and sugary drinks
d.	, , , ,
e.	No sugary drinks, only water
6. How	do you deal with or manage stress?
a.	$\epsilon$
b.	Physical activity
c.	Meditation

- d. Indulging in food, alcohol, sex, etc.
- e. Other (Please specify)
- 7. How would you rate your spiritual life in terms of reading the bible daily, attending church services regularly and so forth?
  - a. Very good
  - b. Good
  - c. Neutral
  - d. Bad
  - e. Very bad
- 8. What do you understand by living healthy?
  - a. Prevention and management of diseases
  - b. Reduction of comorbidities
  - c. Maintenance of a healthy life
  - d. All of the above
  - e. None of the above
- 9. Why is achieving a healthy life important?
  - a. To be healthy, physically fit, and best to live a full life
  - b. To show people how good I look
  - c. Because my primary care provider says so
  - d. Because it is all over the media
- 10. Who is capable of achieving a healthy lifestyle?
  - a. No one
  - b. Everyone regardless of age, race, gender, socioeconomic status, health problems
  - c. Only people with medical conditions
  - d. Only people without medical conditions
  - e. Only adults, children are excluded
- 11. What are some methods of achieving a healthy life?
  - a. Healthy diet, physical activity, adequate sleep
  - b. Healthy diet, sedentary lifestyle, lots of sleep
  - c. Unhealthy diet, physical activity, adequate sleep
  - d. Unhealthy diet, sedentary lifestyle, very little sleep
- 12. Give examples of healthy dietary choices.
  - a. Soda, French fries and fried chicken or fish
  - b. Baked or grilled chicken or fish, baked potatoes, salad and water
  - c. Potato chips, canned/processed soup, bottle juice
  - d. White bread, cold cut, cheese, no vegetables and coca cola

### **APPENDIX H: Healthy Lifestyle Forever Health Fair Posttest Questions**

Participant ID:	Date:		
Please answer these questions to the best of your ability.			

- 1. What do you understand by living healthy?
  - a. Prevention and management of diseases
  - b. Reduction of comorbidities
  - c. Maintenance of a healthy life
  - d. All of the above
  - e. None of the above
- 2. Why is achieving a healthy life important?
  - a. To be healthy, physically fit, and best to live a full life
  - b. To show people how good I look
  - c. Because my primary care provider says so
  - d. Because it is all over the media
- 3. Who is capable of achieving a healthy lifestyle?
  - a. No one
  - b. Everyone regardless of age, race, gender, socioeconomic status, health problems
  - c. Only people with medical conditions
  - d. Only people without medical conditions
  - e. Only adults, children are excluded
- 4. What are some methods of achieving a healthy life?
  - a. Healthy diet, physical activity, adequate sleep
  - b. Healthy diet, sedentary lifestyle, lots of sleep
  - c. Unhealthy diet, physical activity, adequate sleep
  - d. Unhealthy diet, sedentary lifestyle, very little sleep
- 5. Give examples of healthy dietary choices.
  - a. Soda, French fries and fried chicken or fish
  - b. Baked or grilled chicken or fish, baked potatoes, salad and water
  - c. Potato chips, canned/processed soup, bottle juice
  - d. White bread, cold cut, cheese, no vegetables and coca cola

### Additional questions:

1.	Did you enjoy the health education fair? Yes No
2.	Oid you find the educational material helpful? Yes No
3.	Was the content of the education easy to understand? Yes No
4.	Oid the presenter(s) exhibit knowledge of the education? Yes No
5.	Oo you intend on making lifestyle changes to ensure a healthier life? Yes No
6.	What did you most like about the health education fair?
7.	What did you like least about the health education fair?
8.	What additional information would you like to be included in the next education fair?
9.	What information would like to be omitted from the current education?
10.	Additional comments:

a. Reading

b. Physical activity

## **APPENDIX I:** Healthy Lifestyle Forever **Program Completion Evaluation and Survey**

Partici	pant Il	D Number:I	Date:
Please d	Please answer the following questions to the best of your ability		
1.	a. b. c.	u believe you are overall healthy? Yes No Somehow Don't know	
2.	<ul><li>a.</li><li>b.</li><li>c.</li><li>d.</li></ul>	erage, how many days a week do you engage in physic None 1- 2 days 3-4 days 5-6 days Everyday	al activity?
3.	<ul><li>a.</li><li>b.</li><li>c.</li><li>d.</li></ul>	None 0-4 hours 5-8 hours 9-12 hours 13 or more hours	
4.	<ul><li>a.</li><li>b.</li><li>c.</li><li>d.</li></ul>	None Once Twice Three times Four or more	
	<ul><li>a.</li><li>b.</li><li>c.</li><li>d.</li><li>e.</li></ul>	More sugary drinks than water Same amount of water and sugary drinks No water, only sugary drinks No sugary drinks, only water	you drink in a day?
6.	How d	lo you deal with or manage stress?	

- c. Meditation
- d. Indulging in food, alcohol, sex, etc.
- e. Other (Please specify)
- 7. How would you rate your spiritual life in terms of reading the bible daily, attending church services regularly and so forth?
  - f. Very good
  - g. Good
  - h. Neutral
  - i. Bad
  - j. Very bad
- 8. What do you understand by living healthy?
  - a. Prevention and management of diseases
  - b. Reduction of comorbidities
  - c. Maintenance of a healthy life
  - d. All of the above
  - e. None of the above
- 9. Why is achieving a healthy life important?
  - a. To be healthy, physically fit, and best to live a full life
  - b. To show people how good I look
  - c. Because my primary care provider says so
  - d. Because it is all over the media
- 10. Who is capable of achieving a healthy lifestyle?
  - a. No one
  - b. Everyone regardless of age, race, gender, socioeconomic status, health problems
  - c. Only people with medical conditions
  - d. Only people without medical conditions
  - e. Only adults, children are excluded
- 11. What are some methods of achieving a healthy life?
  - a. Healthy diet, physical activity, adequate sleep
  - b. Healthy diet, sedentary lifestyle, lots of sleep
  - c. Unhealthy diet, physical activity, adequate sleep
  - d. Unhealthy diet, sedentary lifestyle, very little sleep
- 12. Give examples of healthy dietary choices.
  - a. Soda, French fries and fried chicken or fish
  - b. Baked or grilled chicken or fish, baked potatoes, salad and water
  - c. Potato chips, canned/processed soup, bottle juice
  - d. White bread, cold cut, cheese, no vegetables and coca cola

### Please answer the following questions to the best of your ability

Additional	questions:
------------	------------

1.	Did you enjoy the He Yes	althy Lifestyle Forever Program? No
2.	Did you find the Heal Yes	thy Lifestyle Forever Program helpful? No
3.	Did you find the infor Yes	mation on healthy lifestyle choices easy to understand? No
4.	Did you find the educ Yes	ation on healthy lifestyle modification easy to comply and commit?
5.	Do you intend on con Yes	tinuing with the lifestyle changes to ensure a healthier life? No
6.	What did you most like	te about the Healthy Lifestyle Program?
7.	What did you like lea	st about the Healthy Lifestyle Program?
8.	What additional infor	mation would you like to be included in the next education fair?
9.	What information wo	uld like to be omitted from the current educational material?
10.	Additional comments	:
	Thank you for you	r participation in the Healthy Lifestyle Forever Program!

## **APPENDIX J: Healthy Lifestyle Forever Mid-Program Follow Up**

Participant ID Number:	Date:
Please answer the following questions	to the best of your ability.
1 3371 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. 1 1/1 0

- 1. What do you understand by living healthy?
  - a. Prevention and management of diseases
  - b. Reduction of comorbidities
  - c. Maintenance of a healthy life
  - d. All of the above
  - e. None of the above
- 2. Within the past two weeks, on average, how many times a day (e.g. breakfast, lunch, dinner and snacks) did you make healthy dietary choices?
  - a. None
  - b. Once a day
  - c. Twice a day
  - d. Three times a day
  - e. Four or more times
- 3. Within the past two weeks, on average, how many ounces of water did you drink daily?
  - a. None
  - b. 0-8 oz
  - c. 9-16 oz
  - d. 17-24 oz
  - e. 25 oz or more
- 4. Within the past two weeks, on average, how many days a week did you engage in low, moderate or vigorous physical activity?
  - a. None
  - b. Once a week
  - c. Twice a week
  - d. Three days a week
  - e. Four or more days a week
- 5. Within the past two weeks, on average, how long did you engage in a low, moderate or vigorous physical activity in a day?
  - a. None
  - b. 0-15 minutes
  - c. 15 30 minutes
  - d. 30-45 minutes
  - e. 60 minutes or more

- 6. Within the past two weeks, how many hours, on average, have you been sleeping daily?
  - a. None
  - b. 2 4 hours a day
  - c. 5 6 hours a day
  - d. 7 8 hours a day
  - e. 9 or more hours a day
- 7. Within the past two weeks, how would you rate your spiritual life in terms of reading the bible daily, attending church services regularly and so forth?
  - k. Very good
  - 1. Good
  - m. Neutral
  - n. Bad
  - o. Very bad
- 8. Within the past two weeks, what have you done for fun and relaxation?
  - a. Reading books, magazines etc.
  - b. Watching TV or going to the movies
  - c. Going out with friends, family, and others
  - d. Indulging in food, alcohol and sex
  - e. Other (please specify)
- 9. Within the past two weeks, how have you coped with or managed stress?
  - a. Reading and relaxation
  - b. Physical activity
  - c. Meditation or spiritual counseling
  - d. Indulging in food, alcohol and sex
  - e. Other (please specify)
- 10. Within the past two weeks, what methods have you used to monitor your healthy lifestyle? (Select all that apply)
  - a. Daily log sheets
  - b. Pedometers
  - c. Food, sleep, physical activity diaries
  - d. Self-tracking with mobile app
  - e. Other (please specify)

Do you need any resources or additional information on healthy lifestyle education?

## **APPENDIX K: Healthy Lifestyle Forever Education Material**



#### What is healthy living?

 Living a lifestyle that ensures prevention of diseases, management of diseases and maintenance of healthy life, and reduction of comorbidities.

#### • Why do we need healthy living?

- A healthy body mass index (BMI) is one of the ways to measure a person's health
  - BMI of 18.5 24.9 is considered normal and healthy
  - A BMI less than 18.5 is considered underweight Associated conditions include malnutrition, anemia, fertility problems, decreased immune function, increased complications from surgery, osteoporosis
  - A BMI of 25.0-29.9 is overweight, while 30.0 and above is considered obese –
     Associated problems involve cardiovascular (HTN, stroke), gastric (GERD),
     respiratory (OSA), musculoskeletal, diabetes, etc.

- To prevent illness, manage diseases, and reduce comorbidities and complications
- To be healthy and physically fit
- To feel and be at the best to live a full life
- To look and feel good
- To increase strength and body tone

#### Who can obtain healthy living?

• Everyone - within capabilities.

#### How can one attain a healthy lifestyle?

- Modify lifestyle Desire, Decision, Diligence, Determination and Discipline
- Make / commit to SMART (Specific, Measurable, Achievable, Realistic, Timely) goals.
- Have an accountable partner to assist with complying to set goals

#### • Which measures can help attain healthy living?

#### • Eat healthy

- Nutritious meals and snacks: Know what you are eating. Choose wisely and healthily
- Decrease empty caloric and non-nutritional value food or drink intake (sodas, junk foods, chips etc.)
- Eat in moderation not only in quantity but quality as well
- Eating high caloric foods require engagement in activities to prevent weight gain
- Ensure intake of good protein, fruits and vegetables, good carbohydrates and fats,
   water intake to replace sugary beverages)
- Baked, boiled, grilled, broiled versus fried
- Home cooked meals, fresh fruits and vegetables versus canned or processed foods

- Protein used everywhere in the body, enzymes for chemical reactions and hemoglobin to carry oxygen in blood
  - Best protein Poultry (chicken, turkey, duck), seafood (fish salmon, mackerel, sardines, mollusks snails, octopuses; crustaceans shrimps, lobsters, crabs), eggs, plants such as beans, lentils, nuts and seeds, whole grains and other vegetables and fruits
  - Better protein Dairy products yogurt
  - Good protein red meat, goat or lamb
  - Bad protein processed meats bacon, hot dogs, sausages, cold cuts
- Carbohydrates Sugars and starches are used for energy. Fibers are used to help our digestive system
  - Good whole, unprocessed simple sugars sucrose, glucose, fructose and galactose) examples are whole grains, whole fruit, vegetables, legumes, beans, potatoes
  - Bad Refined processed, complex sugars examples white bread, white pasta, white rice, sugar sweetened beverages, fruit juices
- Fat used for energy. Low fat is not always healthy fat low-fat diets raise
   triglycerides and lowers good cholesterol
  - Healthy fat Unsaturated and omega 3- fats Examples are plant oils, such as olive, canola, corn, peanut and other nut oils; nuts, such as almonds, peanuts, walnuts, and pistachios; avocados; and fish, especially oily fish such as salmon and canned tuna

- Less healthy Saturated fat Examples are saturated fats such as butter,
   cheese, cream, coconut oil, palm oil
- Unhealthy fat Trans-fat Examples are margarines, snacks, processed foods and commercially prepared baked goods.

#### • Exercise regularly and consistently

- At least 30 minutes a day (recommendation is 150 minutes weekly)
- Minimum of three days a week
- Examples brisk walking, jogging, aerobics, crunches, push-ups, swimming, yoga,
   Zumba etc.
  - Practical examples park far and walk to the store, take the stairs instead of elevators, walk to your neighbor who lives 2 blocks away instead of driving etc.
- Links for exercises for various age groups (only do what you can based on your ability)
  - o https://go4life.nia.nih.gov/how-to-stay-safe-during-exercise-and-physical-activity/
  - o https://www.youtube.com/watch?v=YvrKIQ Tbsk
  - o https://www.youtube.com/watch?v=SaYDK\_LH\_uk
  - o https://www.youtube.com/watch?v=D7hrDkbXHxk
  - o https://www.youtube.com/watch?v=V4XW74W9t4o
  - o https://www.youtube.com/watch?v=gC\_L9qAHVJ8

#### • Ensure adequate sleep

- Adults between six to eight hours
- Sleep early or on time on a regular basis to achieve this
- Ensure a restful night by being relaxed prior to sleeping

 Relaxation techniques: reading books, watching TV, listening to music, meditation, etc.

#### • Healthy ways of dealing with stress

- Take care yourself eat healthy, exercise regularly, get adequate sleep
- Take a break from everything healthy shopping, massage, spa, nice outing with friends or family etc.
- Talk to others parent, friend, counselor, doctor, pastor
- Avoid unhealthy habits such as drugs, alcohol, smoking, inappropriate sex
- Recognize when you need more help and seek professional counseling Licensed psychiatrist, social worker, counsellor and pastor

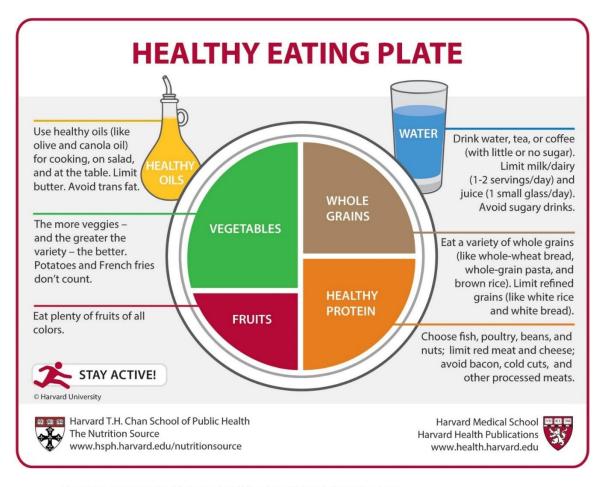
#### • Spiritual development

- Daily Bible reading and meditation
- Pray always and consistently
- Regular church attendance
- Talk to and with others about Jesus Christ
- Get involved in kingdom agenda serving, working, giving, utilizing gifts / talents.

\*\*\*Other measures include alcohol and smoking cessation, regular sexual intercourse if married, and compliance to prescribed medications as well as multivitamins. Consult with your primary care provider prior to taking herbal supplements. \*\*\*

#### • Where can one work on achieving a healthy life?

- Anywhere and everywhere home, school, work, gym, etc
- With Whom can one achieve a healthy life? By yourself, with friends, family, loved ones, community, colleagues



### THE HEALTHY EATING PYRAMID

Department of Nutrition, Harvard School of Public Health



#### References

- Center for Disease Control and Prevention (CDC). (2019). *Violence prevention: Coping with stress*. <a href="https://www.cdc.gov/violenceprevention/suicide/copingwith-stresstips.html">https://www.cdc.gov/violenceprevention/suicide/copingwith-stresstips.html</a>
- Harvard T.H. Chan School of Public Health. (2020). What should I eat? Protein. *The Nutrition Source*. <a href="https://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/protein/">https://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/protein/</a>
- Willet, W., & Miller, A.M. (2020). Healthy eating plate. *The Nutrition Source*.

https://www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/

# APPENDIX L: Healthy Lifestyle Forever NON-DISCLOSURE AGREEMENT

This agreement entered into this 25th day of Jan	nuary, 2020, by and between Healthy Lifestyle
Forever Program (HLF) and	, known as part of the "HLF Team", and
known collectively as the "Parties", set forth the	e terms and conditions under which information
created or received by or on behalf of HLF Prog	gram (known collectively referred to as protected
health information, or "PHI") may be used or di	sclosed under State law and the Health Insurance
Portability and Accountability Act of 1996 and	updated through HIPAA Omnibus Rule of 2013
and will also uphold regulations enacted there u	nder (hereafter "HIPAA").

THEREFORE, in consideration of the agreements and conditions contained herein, the Parties intending for this agreement to be legally bound agree as follows:

- **1.** Confidential Information. The Parties accept the term "Confidential Information" includes, but is not limited to, PHI, any information/data collected about HLF, any encrypted or password protected participant data stored in Microsoft Excel on a personal computer for the purposes of collecting and logging data for the HLF program, any participant lists and any information that concerns the HLF Program relationships with Winning Grace International Church (WGIC), or is otherwise designated as confidential by the HLF Program.
- **2. Disclosure**. Disclosure of Confidential Information includes the use of verbal communications as well as written or distributed health materials from any source or in any format (e.g., paper, electronic, etc as well as tangible physical documentation, in whole or in part). The Parties have entered into this Agreement to rely on the covenants contained herein to make such use or disclosure.
- **3. Applicable Law**. Confidential Information of participants of the HLF program will not be used or disclosed by members of the HLF Program team in violation of applicable laws such as HIPAA Federal and State records owner statute, this Agreement as amended by the HLF Program periodically. The intent of this Agreement is to assure that the HLF Program Team will access only the necessary and applicable minimum level of Confidential Information needed to achieve the mission and goals of the HLF Program. Additionally, the HLF Program team will not disclose Confidential Information to others outside of the HLF Program team. The HLF Program team will ensure that all Confidential Information received from program participants will be treated as confidential. Disclosure of participant data will be de-identified just for the sole purpose of the write-up of the Doctor of Nursing Practice Capstone Project as part of the requirements for graduation for the HLF Program team lead.
- **4. Log-in Code and Password**. The designated team members understand that they will be assigned a log-in code or password, which may be changed as the HLF program, in its sole discretion, sees fit. The designated team members will not change the log-in code or password without the HLF program director's permission. Nor will the designated team members leave confidential information unattended (e.g., so that it remains visible on computer screens after the team members' use). The team members agree that the log-in code or password is equivalent to a

legally binding signature and will not be disclosed to or used by anyone other than the designated team members. Nor will the designated team members use or even attempt to learn another person's log-in code or password. The designated team members immediately will notify the HLF director upon suspecting that their log-in code or password no longer is confidential. The designated team members agree that all computer systems are the exclusive property of HLF program and will not be used for any purpose unrelated to the HLF program. The designated team members acknowledge that they have no right of privacy when using this HLF computer and the software programs and that their computer use periodically will be monitored by the HLF director to ensure compliance with this Agreement and applicable law.

**5. Returning Confidential Information**. Following completion of the HLF Program, all team members will bring copies of all Confidential Information to the HLF Program director to properly and safely dispose all confidential information unless otherwise required by applicable law. The HLF Program team understands that violating any part or section of the terms outlined in this agreement may result in legal action to prevent or recover damages for breach as applicable. Additionally, it will be necessary to report any breach to the necessary officials.

In the presence of a witness and considering this document as a legally binding agreement, the parties in this non-disclosure agreement have agreed on the date written on the first page of this agreement, with full understanding that this agreement shall stand.

HLF Team member Signature	Date	
Print Name		