Secondary TIA Outpatient Prevention (STOP) Program: Addressing Individuals of Lower Socioeconomic Status

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SECONDARY TIA OUTPATIENT PREVENTION (STOP) PROGRAM:
ADDRESSING INDIVIDUALS OF LOWER SOCIOECONOMIC STATUS

by

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This Scholarly Project Paper submitted by Mackenzie Funke and Kasey Nieland in partial fulfillment of the requirement for the Degree of Master of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

[Signature of Facility Advisor]

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Department      Occupational Therapy

Degree          Master of Occupational Therapy

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Mackenzie Funke
April 11, 2019

Kasey Nieland
April 11, 2019
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ABSTRACT

The purpose of this scholarly project was to provide secondary prevention in an outpatient setting to individuals who have experienced a transient ischemic attack (TIA) and are of lower socioeconomic status (SES). Stroke is the fifth leading cause of death in the United States and the leading cause of long-term disability (National Stroke Association, 2018). An estimated 795,000 plus Americans experience a stroke each year (Benjamin et al., 2017). Of this estimation, about 185,000 Americans experience a recurrent stroke (Benjamin et al., 2017). Roughly, one half of patients fail to seek medical attention within 24 hours of a TIA (Sharry et al., 2014). More than one third of the individuals who experience a TIA and do not seek treatment have a major stroke within a year (American Stroke Association, 2016). Individuals of lower SES are at a higher risk for stroke (Addo et al, 2012; Khare, 2016). Therefore, there is a lack of awareness of what a TIA is and the presentation of symptoms that can impact the wellbeing of individuals and their risk for a recurrent stroke. Research studies have been conducted on the effectiveness of implemented secondary prevention programs for individuals who experienced a TIA or stroke. These studies have provided promising results and are cost-effective (Hill et al., 2017; Holzemer et al., 2011; Leistner et al., 2013).

An extensive literature review was completed to gather information related to secondary prevention specifically for individuals who have experienced a TIA, are 55 plus, and are of a lower SES. Information obtained from the review of literature revealed the effectiveness of secondary prevention programs for TIA or strokes. Early
implementation of secondary prevention programs and follow-up sessions are necessary for individuals of lower SES. This program took health literacy rates into consideration for individuals of lower SES.

The final product of this group protocol was a set of six detailed group sessions tailored for individuals who have experienced a TIA, are 55 plus, and are of lower SES. Overarching themes discussed in the group sessions were modifiable risk factors, self-management, establishing healthy routines, and holistic wellness all included in the final product. Each group session consisted of a step-by-step guideline for the facilitator and included activities with discussion questions. The group protocol was developed with the intention that registered occupational therapists would implement the group protocol in an outpatient setting. A seventh session consisted of an at home follow-up. This session addressed barriers for participants to maintain a healthy lifestyle, occupational identity, and occupational competency.
CHAPTER 1
INTRODUCTION

In the United States (U.S.) an individual experiences a stroke every 40 seconds and every four minutes someone dies from a stroke (Centers for Disease and Control Prevention [CDC], 2017). Stroke, otherwise known as a cerebrovascular accident (CVA) was the fifth leading cause of death in the U.S. and the leading cause of long-term disability (National Stroke Association [NSA], 2018b). An estimated 795,000 plus Americans experienced a stroke each year and approximately 610,000 of these individuals experience one for the first time. Of this estimation, about 185,000 Americans experience a recurrent stroke, roughly that is one in four individuals (Benjamin et al., 2017). The incidence of a stroke increases for individuals of a lower socioeconomic status (SES) (Addo et al., 2012; Khare, 2016). According to the CDC (2018), there are three main types of stroke including: ischemic stroke, hemorrhagic stroke, and transient ischemic attack (TIA). Ischemic strokes happen when the oxygen rich blood flowing to the brain becomes blocked. Hemorrhagic strokes occur when an artery in the brain leaks blood or bursts. Lastly, a TIA is the same as an ischemic stroke however, blood flow returns within approximately five minutes and symptoms resolve within one hour (CDC, 2018). A TIA is often referred to as the “mini stroke” “warning stroke” or “ischemic attack” and a precursor for a larger stroke event such as the ischemic or hemorrhagic stroke (American Stroke Association [ASA], 2016). Due to the growing incidence of TIAs and lower SES, secondary prevention plays a vital role in reducing the risk of
recurrent stroke. As prevention is an emerging area of practice within the profession of occupational therapy (OT), there becomes a need for occupational therapists to aide in secondary prevention of a TIA or stroke. Secondary prevention focuses on reducing injury or disease which has already occurred and slowing the progression (Institute for Work & Health, 2015). The development of this program is an example of secondary prevention which focuses on reducing the chance of a recurrent TIA or stroke. According to the National Stroke Association (2018c) individuals age 55 and above are at an increased risk for experiencing a stroke and this risk doubles every decade they are alive. In addition, for an individual who has experienced an ischemic stroke, the chance of disability or death increases with lower SES (Bettger et al., 2014). Therefore, the authors chose this population of individuals age 55 or older and who are of a lower SES, who have experienced a TIA, and are now at risk for a secondary TIA.

An estimated 80% of strokes are preventable through management of modifiable risk factors (NSA, 2018c). Literature supports the early implementation of prevention programs that consist of education and identifying modifiable risk factors through lifestyle modifications (Khare, 2016). However, there was limited research with OT playing a role in secondary prevention programs that targeted a TIA or stroke. Occupational therapists have the necessary background and unique set of skills to implement secondary prevention programs. Education and lifestyle modification are the initial steps in prevention of a TIA (Khare, 2016). Various research studies conducted secondary prevention programs that targeted stroke with implemented sessions on education, eating healthy, active lifestyle, medication adherence, risk factors, goal setting, and identification of self-regulatory skills to manage risk factors associated with a stroke (Hill et al., 2017; Holzemer, Thanavaro, Malmstrom, & Cruz-Flores, 2011). With the
support of research, the group protocol was designed to address the modifiable risk factors identified to improve the participants’ health outcomes and prevent a second TIA or a stroke. In addition, the interventions within each group session are within the scope of OT and can play a vital role in prevention. Overall, secondary prevention of a TIA or stroke helps to reduce healthcare costs and provide effective results (Hill et al., 2017; Holzemer et al., 2011; Leistner et al., 2013).

The purpose of this scholarly project was for occupational therapists to provide education at an understandable literacy level for the targeted population to reduce a recurrent TIA or larger stroke from occurring. The Secondary TIA Outpatient Prevention (STOP) Program provided a detailed group protocol with seven sessions that addressed and focused on establishing a healthy lifestyle. This group protocol was designed to reduce modifiable risk factors associated with the participants’ TIA through engagement in evidence-based and occupation-based activities. Included within the STOP Program was a pre-test and post-test tailored to the program and designed to measure the outcomes. The sessions within the STOP Program contained education on TIA modifiable risk factors, self-management skills, medication management adherence, establishing healthy routines for meal preparation and stress management, community and social supports, and a wrap-up to promote wellness. Lastly, a follow-up session was offered at the conclusion of the program to assess each participants’ progress in establishing a healthy routine.

Some factors that will impact and influence the application of this program are transportation, risk factors the participants have for a recurrent TIA or a stroke, participants’ literacy level, and level of socioeconomic status. Transportation may play a barrier in participants attendance in the prevention program and engagement in
recommendations prior to each group session. Health risk factors of participants may vary; therefore, the occupational therapist may need to adjust the implementation of the program. The socioeconomic status and health literacy of participants may also vary but the application of this program could be adjusted based on the overall literacy and health literacy levels of the group. If participants have a lower literacy level, more pictures and application-based tasks could be implemented. If participants have literacy levels appropriate for the intended group, then the group application would not need any adjustments.

The theoretical model utilized for this scholarly project was the Model of Human Occupation (MOHO). Each group session was guided by the MOHO and addressed key concepts of volition, habituation, performance capacity, and environment of the participants’ lives for the establishment of lifestyle modifications (Taylor & Kielhofner, 2017). These main areas of focus help determine an individual's occupational identity through occupational adaptation and assist in maintaining occupational competency (Model of Human Occupation, 2018). Along with the application of the MOHO, Cole’s Seven Steps was chosen to guide the group sessions. The STOP Program has been designed for an occupational therapy practitioner to facilitate each session. Cole’s Seven Steps includes an introduction, activity, sharing, processing, generalizing, application, and summary section (Co7le, 2018). The layout of Cole’s Seven Steps allows for the occupational therapy practitioner to have the flexibility to modify and adapt the sessions to meet the goals of the group.

In addition to the flexibility of the group protocol, it also addressed the potential concerns of health literacy, which tends to be low with individuals of lower SES, we chose to utilize a teach-back method. This method has shown to be an effective approach
to verify that information has been understood (Bastable, 2011; U.S. Department of Health & Human Services, 2008). This approach will allow for participants to demonstrate and restate information in their own words and to ensure an understanding of the education provided (Bastable, 2011).

Chapter I provided an outline of supported literature on secondary prevention that specifically targeted a TIA population with lower SES. Chapter II consists of an extensive review of the literature on TIA prevention. The literature review outlines (1) the risk factors and prevalence of disorder, (2) prevention, (3) evidence of secondary prevention, (4) lower socioeconomic status and impact on recovery, (5) role of occupational therapy, (6) education, (7) theory, and (8) assessments. Chapter III consists of a thorough description of the methodology utilized to develop the group protocol for the STOP Program. Chapter IV outlines the purpose and rationale, description of the theory chosen, and detailed group protocol, including outlines of each group session and handouts. Chapter V concludes with a summary and recommendations on the product for future use and potential modifications for effectiveness.
Key Concepts

- **Environment**: Different contexts influence how the volition, habituation and performance capacity are affected (Clifford O’Brien, 2017).

- **Habituation**: Patterns and routines an individual engages in efficiently and automatically, may include familiar temporal, physical and social habits (Taylor & Kielhofner, 2017).

- **Health literacy**: “the degree to which individuals have the capacity to obtain, process and understand basic health information and services need to make health appropriate decision” (US Department of Health and Human Services, n.d.).

- **Modification**: something that is changed slightly to improve or make it more acceptable or less extreme; for example making lifestyle modifications (Cambridge English Dictionary, 2019).

- **Lower socioeconomic status**: including individuals of lower educational achievement, poverty and poor health, and ultimately affect our society (American Psychological Association, 2019b).

- **Modifiable risk factors**: something that impacts a disease that can be changed, improved and individuals have control over (University of California San Francisco, 2019).

- **Occupational adaptation**: Participants ability to adapt and to create a positive occupational identity and achieve occupational competence in their own environment (O’Brien & Kielhofner, 2017).

- **Occupational competence**: an individual's ability to participate in occupations, roles, routines that reflect their occupational identity (O’Brien & Kielhofner, 2017).
• **Occupational engagement**: the process of doing, thinking, or feeling under certain environment conditions (Kielhofner, 2008c).

• **Occupational identity**: what a person does is a reflection of what the person has done in the past and what they hope to become as an occupational being (O’Brien & Kielhofner, 2017; Clifford O’Brien, 2017).

• **Participation**: when an individual engages in work, play or activities of daily living that are a part of the participants context or necessary for their well-being (Clifford O’Brien, 2017).

• **Performance capacity**: How an individual's performance is affected based on mental or cognitive abilities, as well as bodily systems, such as: musculoskeletal, neurological, cardiopulmonary and other systems (O’Brien & Kielhofner, 2017).

• **Secondary prevention**: Secondary prevention focuses on reducing injury or disease which has already occurred, slowing the progression (Institute for Work & Health, 2015).

• **Stroke (cardiovascular accident)**: oxygen rich blood flowing to the brain becomes blocked or an artery in the brain leaks blood or bursts (CDC, 2018c).

• **Socioeconomic status**: social standing of an individual based on education, income and occupation (American Psychological Association, 2019a)

• **Transient Ischemic Attack**: blood flow to the brain stops for an average of one to five minutes, however these symptoms last less than 24 hours (National Stroke Association, 2018b).

• **Volition**: Refers to the individuals need, desire, feeling and thoughts toward and what they choose to do or engage in (Taylor & Kielhofner, 2017).
CHAPTER II
LITERATURE REVIEW

Introduction

In the United States (U.S.), stroke continues to be a leading cause of long-term physical disability for adults (Benjamin et al., 2017). An estimated 795,000 plus Americans experience a stroke each year and approximately 610,000 of these individuals experience one for the first time (National Stroke Association [NSA], 2018b). Of this estimation, about 185,000 Americans experience a recurrent stroke, roughly that is one in four individuals (Benjamin et al., 2017). A transient ischemic attack (TIA) is often referred to as the “mini stroke” “warning stroke” or “ischemic attack” and a precursor for a larger stroke event (American Stroke Association [ASA], 2018). In the U.S. alone, 200,000 to 500,000 TIAs are diagnosed annually (Khare, 2016). When an individual experiences a TIA, the blood flow to the brain stops for an average of one to five minutes, however these symptoms last less than 24 hours (NSA, 2018c). TIA symptoms mimic stroke symptoms, which may include: weakness, numbness, or paralysis of the face, blindness or double vision in one or both eyes, garbled speech or difficulty understanding someone, and sudden or severe headaches with no known cause (ASA, 2018).

One half of patients failed to seek medical attention within 24 hours of a TIA (Sharry et al., 2014). The evidence of factors that influenced care-seeking delay in TIA patients was limited and inconsistent. Sharry et al. (2014) found that there were five
reasons for a delay in receiving care (a) time for evaluation of semantic information as indicating illness, (b) deciding whether to seek professional medical care, (c) making a doctor’s appointment, (d) seen by a medical professional, and (e) actually obtaining treatment. It was also noted that people do not recognize their symptoms as a TIA because they resolve within 24 hours (NSA, 2018b). The main reason people elected to receive treatment was because family or friends became active and encouraged the patient to receive treatment (Sharry et al., 2014). Therefore, a lack of awareness of what a TIA was and the presentation of symptoms impacted the wellbeing of individuals and their risk for a recurrent stroke.

Transient ischemic attacks are often neglected because symptoms tend to improve (Khare, 2016). More than one third of individuals who experienced a TIA that did not seek treatment had a major stroke within a year (ASA, 2016). Leistner et al. (2013) supported the idea that individuals who have had a stroke or TIA are at a higher risk for a recurrent stroke, but one third of individuals discontinue any secondary treatment offered. Without secondary treatment, individuals are at a higher risk for a stroke event (Leistner et al., 2013). In 2018, stroke was the fifth leading cause of death in the U.S. and the leading cause of long-term disability (NSA, 2018c). Therefore, there is still a need for early intervention for secondary prevention of a TIA or stroke to further prevent disability and impact the quality of life of individuals.

Risks Factors and Prevalence of Disorder

Those who have a stroke are more likely to experience anxiety, depression, and a lack of participation in meaningful daily activities (Lund, Michelet, Kjeken, Wyller, & Sveen, 2012). This can impact their well-being which can further lead to a secondary TIA or a stroke (Lund et al., 2012). Khare (2016) stated that males over the age of 55 have a
higher risk than women of experiencing a TIA. According to the National Stroke Association (2018c), individuals 55 and above are at an increased risk for experiencing a stroke and this risk doubles every decade they are alive. In addition, those who have a family history of a stroke or TIA, high blood pressure, high cholesterol, obesity, diabetes mellitus, tobacco smokers, and individuals of lower socioeconomic status (SES) are at risk (Khare, 2016).

Non-modifiable risk factors are aspects of an individual that you cannot change (Mayo Clinic, 2019). Non-modifiable risk factors associated with stroke and TIA includes family history, sex, age, race, sickle cell disease, and prior TIAs (Mayo Clinic, 2019). Modifiable risk factors are controllable through lifestyle changes that include: (a) managing physical in-activity, (b) nutrition/diet, (c) obesity, (d) smoking cessation, (e) alcohol consumption, and (f) medication adherence to prevent a second stroke from occurring (Holzemer, Thanavaro, Malmstrom, & Cruz-Flores, 2011; Khare, 2016). High blood pressure, high cholesterol, fatty foods, and diabetes are all risk factors that influence each other that could be controlled to prevent stroke (Mayo clinic, 2019). Modifiable risk factors are important in prevention of a secondary TIA or stroke because they are the lifestyle changes that individuals can control to promote healthy living.

**Prevention**

Since stroke was the fifth leading cause of death in the U.S. and the leading cause of long term disability, prevention is a primary concern for this at risk population (NSA, 2018c). For an individual who has experienced an ischemic stroke, the chance of disability or death increased with lower SES (Bettger et al., 2014). Individuals with 13 or more years of education and an adequate SES, are significantly less likely to be disabled (Bettger et al., 2014). However, there was evidence that 80% of strokes are preventable
Individuals who have experienced a TIAs often neglect to seek treatment because their symptoms resolve within 24 hours (Khare, 2016; Sharry et. al, 2014). However, the incidence of secondary stroke occurring in seven days was 11% and within five years was 24-29% (Khare, 2016).

Secondary prevention plays a vital role that decreases the likelihood of a second TIA or stroke from occurring. Preventative medicine used interventions aimed to reduce or prevent health risks (Institute for Work & Health, 2015). There are three types of prevention, including: primary, secondary and tertiary. Primary prevention focuses on preventing injury or diseases before it happens (Institute for Work & Health, 2015). Secondary prevention focuses on reducing injury or disease which has already occurred, slowing the progression. Tertiary prevention aims to maintain quality of life and reduce symptoms of a chronic disease or injury (Institute for Work & Health, 2015). The development of this program was an example of secondary prevention which focused on reducing the chance of a recurrent TIA or stroke. Secondary prevention targets individuals who have experienced the beginning stages of a disease. Similarly, the STOP Program targets individuals who have experienced a TIA. This type of prevention aims to detect the disease as soon as possible, encourages personal strategies to prevent recurrence, and implements programs to return participants to their original health or prevent future problems (Institute for Work & Health, 2015).

The initial steps in preventing a TIA includes education and facilitation of lifestyle modifications. Lifestyle modifications that are incorporated into daily routines include managing physical inactivity, obesity, smoking, alcohol consumption, nutrition/diet, and drug abuse (Khare, 2016). Through implementation of lifestyle modifications of education and participation, there may be a lower chance of a secondary
TIA or a stroke from occurring. The following section will review the effectiveness of secondary prevention of a TIA or stroke programs.

**Evidence of Secondary Prevention**

Faulkner, Stoner, Lanford, Jolliffe, Mitchelmore, and Lambrink (2017) conducted a study that examined the long-term effects and outcomes of an exercise and education program implemented for individuals who had experienced a TIA or minor stroke right after their diagnosis. This study was a randomized control trial where the program was implemented over the course of three and a half years. Participants within the study had fewer strokes and/or recurrent TIAs. The study also found effective outcomes of fewer hospital visits and a decrease in the economic burden followed by a stroke (Faulkner et al., 2017).

The intensified secondary prevention intending a reeducation of recurrent events in TIA and minor stroke patients (INSPiRE-TMS) is a current intensified secondary prevention program, that was created by the Center for Stroke Research in Berlin (Leistner et al., 2013). INSPiRE-TMS prevention program included individuals who had experienced a TIA and minor stroke. This multicentered randomized open intervention trial program focused on improvement in risk factor control and adherence to medical recommendations. There was an evaluation conducted on the effect of optimized secondary prevention on surrogate parameters, evaluation of the influence of body weight, and other metabolic parameters on vascular event rates in secondary prevention. The purpose of this was to calculate the cost-effectiveness of this support program (Leistner et al., 2013). Holzemer, Thanavaro, Malmstrom, and Cruz-Flores (2011) similarly conducted a randomized control design that also implemented interventions for individuals who experienced a TIA or acute ischemic stroke. The design focused on risk
factor control to identify if there were self-regulatory skills to manage risk factors associated with a stroke. Findings supported the need for early implementation of effective secondary prevention strategies before a disabling stroke occurs, along with frequent long-term monitoring. In addition, individualized educational interventions provided significant results in this study and improved adherence to risk-factor modifications within individuals' lifestyles. The structure of these educational sessions included over the phone education from nurses on the stroke team, along with encouragement and support, that addressed goals that the participant wanted to work on over the three-month period (Holzemer et al., 2011). Each of these research studies supported early preventative intervention strategies that targeted modifiable risk factors for individuals who have experienced a stroke, specifically for the TIA population. The findings from both of these studies support the need to target individuals of lower SES for the STOP Program. The INSPIRE-TMS program was cost-effective and addressed the need to prevent further risks of a stroke event in the future.

The INSPIRE-TMS program was composed of three different parts; the first included a standardized questionnaire with questions about demographic information, risk factors, comorbidities, clinical symptoms, and duration of those symptoms (Leistner et al., 2013). The second area utilized assessments to identify areas of need. These included a standard neurological examination given based off of the National Institutes of Health Stroke Scale (NIHSS), modified Rankin Scale (mRS) and the Barthel Index (BI), laboratory measurements (Low-density lipoprotein cholesterol, C-reactive protein, Hemoglobin A1c and International normalized ratio), body mass index measurements and blood pressure measurements. The most important modifiable risk factor for an individual who experienced a TIA was monitoring blood pressure (Zhang, Cadilhac,
Donnan, Callaghan, & Dewey, 2009). Physical activity was measured based on elevated breathing more than 30 minutes per week. The commonality between all of these assessments and labs was that the higher the score, the worse outcome for obtaining a stroke or outcome after a stroke or TIA. The NIHSS, mRS and BI all assess functional outcomes of an individual with a neurological disability. The last portion included outpatient care that was guided by the primary care physician.

Interventions that were implemented included: risk factor control, medication intake, compliance with oral anticoagulation therapy, and joint agreement on an individual’s target plan (Leistner et al., 2013). Intervention strategies involved a comprehensive amount of education on pathophysiology for the individuals at risk for a recurrent event of a stroke or TIA, as well as information on vascular risk reduction. Other intervention strategies included individualized plans with target values and medication, motivation enhancement through feedback strategies, and complementary offers. The results from this study are expected to be completed by the end of the year 2019. The endpoint goal of this research study was to obtain a composite of non-fatal stroke, non-fatal major coronary event, and death. The secondary endpoints included: the rate at which participants met recommended target levels, effects on vascular surrogate parameters, total mortality, frequency of hospital admissions, and the number of days alive at home (Leistner et al., 2013).

Healthy Eating and Lifestyle After Stroke (HEALS) was a study that took place at Rancho Los Amigos National Rehabilitation Center (Hill et al., 2017). The population included nine participants who had a TIA or ischemic stroke greater than or equal to three months prior to enrollment in the program. Participants completed two-hour group sessions each week for three months and could benefit from individual sessions as
needed. Interventions were created for older adults (40 years or older) living independently. The HEALS program focused on healthy and meaningful lifestyle practices through education, awareness, and goal setting. The week sessions included: welcome to HEALS, eating healthy, jump start an active life, avoid dietary pitfalls, vascular risk factors, secondary prevention medications, and maintaining motivation. The program was held weekly for six, two-hour sessions. A formal evaluation and quantitative pre and post analysis of the interventions were utilized to measure the effects and outcomes (Hill et al., 2017). Similarly, Drewnowski and Eichelsdoerfer (2010) supported healthy dieting however, provided insight into healthy dieting with lower socioeconomic status, through discussion of the Thrifty Food Plan (TFP). The TFP relaxed nutrition constraints and maximized Supplemental Nutrition Assistance Program (SNAP) for individuals who were on a budget to provide them with the most nutritious diet based on income (Drewnowski & Eichelsdoerfer, 2010).

Ávila et al. (2015) conducted an at home secondary stroke prevention program for individuals who had experienced a stroke that consisted of a six-and-a-half-month intervention process of two, one-hour long sessions. Participants were selected by several neurologists and rehabilitation workers working in a hospital in Spain. This at home program was individualized and lead by an occupational therapist that implemented the sessions. Sessions targeted physical, cognitive, social, and functional skills to prevent, maintain, and/or rehabilitate participants’ abilities followed by a stroke. The home program showed significant improvement in not only the participants’ cognitive skills, but also their functional independence levels. Recommendations consisted of carrying out research on the effectiveness of rehab treatments within the home (Avila et al., 2015). The results of the Hill et al. (2017) study found that the HEALS intervention study was
feasible and effective. The results concluded that the HEALS program utilized life management interventions for racially and ethnically diverse, low income individuals with a history of stroke or TIA; and it was a cost-effective and practical program for lifestyle modifications (Hill et al., 2017).

Olaiya et al. (2017) conducted an observational study that examined the unmet needs of individuals who had experienced a stroke or TIA at a two-year follow-up after their discharge. The researchers had nurses call the participants to gather data or they sent out questionnaires in regard to the five areas of domain being assessed: body functions, activities and participation, environmental factors, secondary prevention, and post-acute care. Results concluded that there was a significant unmet demand in secondary prevention, especially services related to care and support. Therefore, to meet the demands of individuals who have had a TIA or stroke, there needs to be a follow-up on the education provided to ensure that individuals are receiving the quality of care they deserve through effective interventions (Olaiya et al., 2017). If the needs of individuals are not being met, this can be detrimental in their ability to participate in everyday life activities.

Low Socioeconomic Status and Impact on Recovery

The association between individuals having a stroke and lower SES has been supported throughout research. Addo et al. (2012) conducted a systematic review where they found that individuals with a poor SES in a low-income country were most effected in terms of incidence and had a poor recovery in comparison to middle-high income areas. Arrich, Lalouschek, and Mullner (2005) indicated that there was a “3-fold” higher stroke incidence, stroke mortality, and increased risk of death due to a stroke because of low SES. Individuals of lower SES have a decreased probability of receiving inpatient
rehabilitation within seven to 12 weeks post stroke (Yeh et al., 2017). Kangovi et al. (2013) found that individuals of lower SES prefer acute hospital care over primary care. Patients of low SES are twice as likely to be admitted or to seek care at the hospital but are 45% less likely to seek out ambulatory and preventative cares. Kangovi et al. (2013) found that the overall cost of ambulatory care was more expensive because of additional primary care and specialist appointments after hospitalization (Kangovi et al., 2013).

Preventative strategies that are effective measures for target populations of lower SES, individuals at risk for experiencing a larger stroke, and promotion of access to interventions that address preventative care are necessary worldwide (Addo et al., 2012). Amarenco et al. (2014) conducted an international prospective study that examined individuals 45 years and older who required secondary prevention of stroke. The purpose of this study was to examine the risk of recurrent vascular events according to living characteristics, socioeconomic factors, and geographic locations. Inclusion criteria for this study included individuals that were 45 years or older, and had a TIA within the last two weeks or sustained a minor stroke or ischemic stroke less than six months ago. Any TIA or stroke was required to be confirmed through imaging. Socioeconomic factors included: (a) the number of individuals living in the household, (b) living in an area where accommodations were not available, (c) location, unemployment status, (d) health insurance status, and (e) educational level (shown to be a big indicator of cardiovascular risk). The results of this study concluded that there was a correlation between lower SES and the recurrence of all cardiovascular events (Amarenco et al., 2014).

When an individual has a stroke or TIA, there are psychological impairments that follow as well as the physical components. Physiological factors are important to address in prevention and for those who have a lower SES as this can further hinder an
individual's occupational performance and overall quality of life. Arokiasamy et al. (2015) conducted a cross sectional population survey that examined the correlation of how chronic diseases contributed a burden to individuals in low and middle-income countries and impacted physical and mental health. Additionally, Arokiasamy et al. (2015) examined the correlation between multi-morbidity and self-rated health, activities of daily living (ADL’s), quality of life, and depression. Surveys were completed in six countries with 42,236 respondents who were 18 years and older with low or middle incomes. To measure multi-morbidity, participants had to have two or more of the following eight chronic conditions: angina pectoris, arthritis, asthma, chronic lung disease, diabetes mellitus, hypertension, stroke, and vision impairment. Results from the study indicated that multi-morbidity had a significant impact on individuals with a low to middle income on their physical and mental health outcomes, specifically on older adults. Therefore, Arokiasamy et al. (2015) confirmed that there was a negative correlation of multi-morbidity on not only physical capabilities, but also an impact on quality of life and mental health for those in a low and middle income bracket.

Individuals of a lower SES have a higher risk associated with cardiovascular events that can lead to long term disability. Gupta (2014) conducted a research study that examined population subgroups in Delaware that determined the prevalence of multiple risk factors for cardiovascular disease and identified disparities within this population. The results of this study concluded that 78.20% of individuals living in Delaware with cardiovascular disease (CVD) had multiple risk factors. Individuals with multiple risk factors ranged between 35.64% which had graduated college to 59.02% who had less than or equal to a high school diploma (Gupta, 2014). However, Arrich et al. (2005) found that there was no correlation between the level of education and mortality rate for
individuals who experienced a stroke. Individuals who reported an annual household income of more than $50,000 had the lowest prevalence (40.20%) and those with an income less than $25,000 had the highest prevalence (53.48%) of having multiple risk factors (Gupta, 2014). Arrich et al. (2005), supported this finding that individuals within the third lowest income levels are at an increased hazard ratio of 1.9, meaning an increased mortality rate of individuals who experienced a stroke.

Gupta (2014) recommended that socioeconomically disadvantaged individuals be targeted for healthy lifestyle counseling and early screening for risk factors to reduce CVD outcomes. Healthy lifestyle counseling in this study consisted of not using tobacco, being physically active, maintaining a healthy weight, and making healthy food choices, all of which helped reduce an individual’s risk of developing heart disease or stroke (Gupta, 2014). Although this research study examined one state within the U.S., a majority of people who live within the U.S. are between low to middle class which makes prevention and education a prevalent issue. Numerous secondary preventative strategies have been discussed throughout this literature review for individuals who are at risk and ways to prevent recurrent events for those with a history of a stroke.

An estimated 12% of adults in the U.S. have a proficient health literacy level, meaning, that over a third of adults experience difficulties with common health tasks such as, following simple prescription instructions and labels, or adhering to general immunizations (U.S. Department of Health & Human Services, 2008). Centers for Disease Control and Prevention (2016) define health literacy as the “degree to which an individual has the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions.” Health literacy levels affect individuals of all ages, ethnicities, and backgrounds. With health literacy rates
being low, the delivery of information would require an understanding and teach-back method to demonstrate compliance (U.S. Department of Health & Human Services, 2008). Yan et al. (2016) reported that low to middle income countries may experience more challenges of implementation of life long treatment for chronic conditions due to health literacy and self-efficacy of these individuals typically being low.

Hackman and Spence (2007) conducted a quantitative model study that included an extensive literature search of the efficacy of secondary stroke prevention strategies from meta-analyses of randomized control trials. From the review of these trials, there were five effective preventative strategies to reduce the risk of a recurrent vascular event by greater than 80% with individuals who have a history of TIA or stroke. The five key strategies that were found included: comprehensive dietary modification, exercise, aspirin, statins, and antihypertensive therapy. According to the approach in this study only five patients needed to be treated in order to prevent one major vascular recurrence (Hackman & Spence, 2007). Yan et al. (2016) supported early primary and secondary prevention following a stroke within low and middle income areas. The delivery of services in home, community-based services, and tele-rehabilitation have the potential of providing favorable results of treatment with this population. Secondary prevention of a TIA or stroke could leave many individuals well off without a disability and overall improve their quality of life in everyday life activities.

**Role of Occupational Therapy**

Occupational therapy (OT) can play a vital role in outpatient secondary prevention of a TIA with individuals of lower SES and improve their overall quality of life. Skilled occupational therapists are able to contribute interventions occurring within the scope of OT that promote well-being, participation in meaningful occupations, and
the prevention of a recurrent stroke. Occupational therapists can provide education on hypertension, diabetes, obesity and smoking, exercise and physical activity, meal preparation, medication management, social and community supports, and emotional wellness through leisure participation; all of which can be developed through repetition into a routine (American Occupational Therapy Association [AOTA], 2014). Schmid, Butterbaugh, Egolf, Richards, and Williams (2008) supported the efficacy of OT and stated that 48% of surveyed occupational therapists provided health promotion activities. AOTA (2014) supports occupational therapy’s role in health management and maintenance, home establishment and maintenance, meal preparation and cleanup, safety and emergency maintenance, education, and more within the OT paradigm. In addition, occupational therapists are specially trained and skilled in helping promote, create, establish, and maintain healthy routines, habits, rituals, and roles for improved quality of life. Prevention is an area that addresses the need for individuals who have or are at risk for occupational performance deficits (AOTA, 2014). These performance deficits are what occupational therapists use to guide their treatment process (AOTA, 2014).

Schmid et al. (2008) surveyed 34 occupational and physical therapists from 11 Veterans Health Administration facilities, who treated individuals who had experienced a stroke or a TIA. Of the 34 therapists, 48% provided a home program (HP) on exercise, reduction in smoking, and blood pressure management to their clients. Other areas occasionally addressed by therapists included fall prevention, obesity, alcohol and drug use, and nutrition. No therapists addressed caffeine intake. The results of this study concluded that the best rehabilitation outcomes are obtained when inpatient and outpatient therapists include secondary prevention and HP as a part of patient’s short-term goals, long term goals and interventions (Schmid et al., 2008).
Bailey (2017) supported the idea of occupational therapists implementing preventative strategies for a recurrent stroke. These preventative strategies focused on physical inactivity and promotion of healthy nutrition that are within OT’s scope of practice. To address physical inactivity, moderate to vigorous physical activity was important to reduce the risk of a recurrent stroke. Meal preparation was an area of occupation that helps promote healthy eating habits and patterns that addressed the nutritional component of the modifiable risk factors (Bailey, 2017). Meal preparation is a way to promote cost-efficient meals that help with financial management. Occupational therapists have a creative approach to incorporate physical activities into individuals’ daily lives for those who live a sedentary lifestyle. For example, incorporating exercises in between commercials while watching television, doing household cleaning tasks, working on lawn and gardening tasks, and more are all ways to include occupational tasks as exercise into a daily routine for the promotion of a healthy lifestyle.

**Education**

In order to reduce the likelihood of a second stroke from occurring, research findings were consistent with the results of early implementation of programs that identified modifiable risk factors. These modifiable risk factors included exercise, diet, smoking cessation, and medication adherence that prevented a second stroke from occurring (Holzemer et al., 2011). Education played a vital role in prevention and this was an area of occupation that occupational therapists have used that included formal, informal personal educational needs, and informal personal education participation for improved wellbeing (AOTA, 2014). In addition, long-term monitoring was necessary with individualized educational sessions to control modifiable risk factors associated with secondary stroke prevention (Holzemer et al., 2011).
Holzemer et al. (2011) conducted a randomized control trial that examined the emphasis of risk factor control to increase participants’ self-regulatory skills to manage risk factors associated with stroke and TIA through the use of educational interventions. The educational sessions were tailored and individualized to each participant’s unique issues and provided an opportunity for them to identify their own goals during the three-month intervention process. The sessions provided educational handouts on smoking, diet changes, exercise, statin, anticoagulant therapy, and warning signs for a stroke and TIA. For example, if a person needed to incorporate exercise into their lifestyle, the educational handout would be OT based and incorporated activities of daily living (ADLs) and instrumental activities of daily living (IADLs), that increased heart rate and provided cardiovascular exercise (Holzemer et al., 2011). Occupational therapists provided resources on self-management strategies to improve empowerment for individuals with their own recovery. As previously mentioned, the HEALS program implemented such strategies by occupational therapists that included activity logs to monitor their progress of their health of caloric counting books, daily diet, physical activity, and weight tracking (Hill et al., 2017). Yan et al. (2016) supported primary and secondary prevention of chronic conditions, such as a stroke that include lifelong pharmaceutical treatment, lifestyle maintenance and self-management skills, and recommended positive support from family and caregivers for effective health outcomes.

According to Yan et al. (2016), self-management was a strategy used to promote patient responsibility and cooperation with health care providers recommendations. There are three dimensions that affect self-management quality, including individuals’ capacity, support for self-management and self-management environment. Self-management in relation to stroke involved the patient making an effort to deal with their impairments
from a previous stroke and the challenges that come with a long recovery and the threat of a stroke happening again. Along with self-management, a patient required information about illness, support from family and providers, and education on how they could change their daily behavior based off their beliefs, attitude, social supports, cognitive levels and healthcare providers. Interventions based on self-management have been proven to reduce the risk of stroke recurrence and have positive impacts on healthcare resource utilization. Though self-management has been proven to be beneficial, there are still limited studies that connect self-management resources to low income settings (Yan et al., 2016).

Along with self-management interventions being beneficial, occupational tasks that address exercise are pertinent to an individual's recovery. Occupational tasks that address exercise could include mowing the lawn, running the vacuum, walking to the mailbox, and more. The occupational therapist working with the patient would help them incorporate these ADLs and IADLs into their daily and weekly routines. Along with educational handouts provided, these sessions included a risk reduction plan (exercise, diet, smoking cessation, and medication adherence), and each of these plans were tailored to an individual's unique issues and provided opportunities for them to identify their own goals (Holzemer et al., 2011). Significant results were found in this study for improved adherence to risk-factor modification and these findings supported the need for early implementation of effective secondary prevention strategies before a disabling stroke occurs (Holzemer et al., 2011). Through education for these individuals who are at risk, OT can play a role in health maintenance and management, and prevention of disabling events that can further hinder their engagement in meaningful occupations (AOTA, 2014).
Theory

The Model of Human Occupation (MOHO) is the theory that was followed for the STOP Program (Model of Human Occupation [MOHO], 2018). The MOHO was developed by Gary Kielhofner during the mid-1970’s, with multiple therapists and researchers adjusting the model to give it an all-encompassing platform to date. This model was chosen because it is one of the top used models worldwide in the OT field of practice, with 11% of occupational therapists stating it is their first model of choice (MOHO, 2018). Occupational competency is the individual's ability to perform meaningful occupations, as they identify and reflect one's identity (O’Brien & Kielhofner, 2017). This helps an individual come to the realization and acceptance of occupational contributors, which are the focuses and identity (Christiansen, 1999). Occupational identity is based on what a person wanted to do and a reflection of what they have done in the past (O’Brien & Kielhofner, 2017). This secondary prevention program will aim to change negative and unhealthy identities into healthy and positive occupational identities, by establishing a healthy routine to prevent a future stroke or TIA. This happens through occupational adaptation, which is when an individual achieves a positive occupational identity and gains occupational competence over time in their own environment (O’Brien & Kielhofner, 2017).

The MOHO has three main focuses when it comes to occupation-based practice. The focuses include volition, habituation, and performance capacity (Taylor & Kielhofner, 2017). Volition refers to the process of activities a person is motivated towards, what they choose to do, and their personal causation. Personal causation is an individual's sense of capacity and effectiveness (Taylor & Kielhofner, 2017; Yamada, Taylor & Kielhofner, 2017). This is the motivation that a participant would require to
engage in a chosen or meaningful occupation. This program’s intention is to maintain the participant’s engagement in meaningful occupations throughout their lifetime, as they are experiencing new obstacles with their day-to-day occupations. The volitional process is cyclic, it includes experiences, interpretation, anticipation and activity/occupational choice all of which influence each other to create motivation to participate (Clifford O’Brien, 2017). If participants are able to create goals that they value and are interested in, they will be more likely to meet that goal because they will believe in their occupational competency.

Secondly, the program would focus on habituation which refers to a process whereby doing is internalized and organized into patterns and routines (Taylor & Kielhofner, 2017; Yamada, Taylor & Kielhofner, 2017). In the STOP Program, occupational therapists would focus on creating new habits in their changing lifestyle, which will allow participants to return to their roles, especially important for modifying lifestyles. Creating new habits and roles may reduce unhealthy lifestyle risk factors associated with a recurrent stroke, in hopes to prevent future TIAs or strokes.

Third, this program will focus on performance capacity. Performance capacity refers both to the underlying objective mental and physical abilities and to the lived experience that shapes performance (Yamada, Taylor & Kielhofner, 2017). Participants of this program will have had a TIA and are at risk for stroke, therefore the program will target negative physical and mental abilities that affect occupational performance. The STOP Program will also focus on teaching positive physical and mental abilities that will change the participants’ occupational performance.

An additional focus of the MOHO is environmental contexts, including both physical and social contexts (Clifford O’Brien, 2017). An individual's physical context
consists of natural and human made spaces (nature or human fabrication) and the objects (occur naturally or those that have been made) within them. The social context consists of groups of people and the occupational forms (rules and guidelines) the people that belong to this group perform. MOHO promotes individuals to be engaged with people in their lives and then to provide themselves with physical environments that are stimulating and safe (Clifford O’Brien, 2017). Throughout this secondary prevention program participants will be guided by these four criteria within the MOHO.

This model fits the population of this outpatient secondary prevention program because individuals who have experienced a TIA are at risk for having a stroke due to modifiable risk factors based off each individual. The MOHO works with this population because the program can be changed based on the participant's uniqueness. This guides the therapist in identifying what motivates the participants, so that habits can be formed. Performance capacity will depend on each individual case and some may need adaptations to their program, meanwhile others may want more challenging occupation-based tasks.

**Assessments**

A pre-test and post-test will be completed during the first and last sessions of the *STOP Program*. The pre-test and post-test were developed based off the topics of the seven sessions within the group protocol. As well as, from the MOHO components, which includes volition, habituation, performance capacity, and environment. The pre-test and post-test will determine the benefit of the program if all aspects of the MOHO were addressed throughout the program and how it has impacted the participants and their daily life.
Along with the pre-test and post-test evaluations, the facilitating occupational therapist will have the option to administer two other MOHO based assessments, which are the Interest Checklist and the Occupational Self-Assessment (OSA). Kielhofner and Neville’s (1983) Interest Checklist could be provided to the participant to gather information on their activities or areas of interest (Clifford O’Brien, 2017). This assessment is a self-report that determines a participant’s motivation to participate, strength of interest’s, and activities that they participate in (Kielhofner & Neville, 1983). This will support therapists in determining an individual's volitional goals. In addition to the interest checklist, the Occupational Self-Assessment (OSA) created by Baron, Kielhofner, Iyenger, Goldhammer, & Wolenski (2006) will be an option for the facilitating therapist to provide to their participants to complete (Clifford O’Brien, 2017). This would provide the therapist with client-centered information about the participants values concerning themselves, personal competencies, their environment and the impact of the environment. The OSA allows comparisons of what the participant values with how competent they feel about everyday activities. Similar to the interest checklist, the OSA also assists in determining volition goals. In addition to determining volition goals, it provides information on personal causation for participants.

**Summary**

Overall, the goal of the *STOP Program* was to educate participants on healthy lifestyle modifications, community resources available, and tools that can be utilized to prevent a recurrent TIA or stroke from occurring. In addition, the *STOP Program* followed a client-centered approach and aimed to empower individuals to manage their lifestyle modifications. Secondary stroke prevention cannot only help prevent long-term disability in individuals but also decreases healthcare costs in the long run (Avila et al.,...
Different preventative strategies have been discussed throughout the literature review on lifestyle modifications (Bailey, 2017; Schmid et al., 2008). This can be done through education to lower the risk of stroke (Bailey, 2017; Schmid et al., 2008). There continues to be a lack of research on occupational therapists’ role in educating individuals at risk for a recurrent transient ischemic attack or a stroke, and the implementation of such prevention programs for individuals of a lower SES. From the review of literature, there continues to be a lack of education on what a TIA is and the symptoms associated with it, which leads to individuals not seeking appropriate medical attention to reduce their chance of a recurrent TIA or a larger stroke from occurring.

This product will be clinically useful because occupational therapists can play a dominant role in establishing and applying a client-centered and occupation-based program. Further addressing prevention on TIAs or strokes within the at-risk population can enhance participants’ overall quality of life. Lifestyle and SES of an individual directly impacts the amount of risk they are at for experiencing a second TIA or stroke and can hinder one’s quality of life (Addo et al., 2012). Occupational therapists have the ability and unique skill set to promote and educate individuals on how they can engage in a healthy lifestyle (Bailey, 2017). Stroke continues to be a leading cause of disability and rising healthcare costs, which reinforces the importance of implementing secondary prevention programs specific to TIA or stroke (Leistner et al., 2013; NSA, 2018c). Therefore, occupational therapists can use this STOP Program to deliver client-centered care, education on secondary prevention of a TIA or stroke for those at risk and improve participants quality of life and wellbeing through engagement in a healthy lifestyle routine.
CHAPTER III
METHODOLOGY

The development of the Secondary TIA Outpatient Prevention (STOP) Program was created to provide education to individuals who have experienced a transient ischemic attack (TIA) on modifiable risk factors to prevent a recurrent stroke from occurring. An extensive literature review was performed to gather information related to secondary prevention of a TIA or stroke, specifically related to individuals who have experienced a TIA and are of lower socioeconomic status (SES). Journals and other information were obtained through Harley E. French Library and multiple search engines, including: SCOPUS, PubMed, CINHAL, Psych Info, and Google Scholar. Information searches included the following terms: lower SES, TIA, stroke, secondary prevention specifically related to stroke and/or TIA, occupational therapy role, health literacy, risk factors of a stroke and the use of the model of human occupation (MOHO) for teaching individuals of lower SES and application of MOHO. Pertinent journal articles were taken through the online library at the School of Medicine and Health Sciences at the University of North Dakota. In addition, academic textbooks related to the occupational therapy profession were utilized to explore occupational therapists’ role within this area.

Information obtained from the review of literature revealed the effectiveness of secondary stroke prevention programs, with an emphasis on early implementation of such programs (Hill et al., 2017; Holzemer et al., 2011; Khare, 2016; Lester et al., 2013). The
target population for this program are individuals who have had a TIA, age 55 or older and are of lower SES (Bettger et al., 2014; National Stroke Association, 2018c). From the content that was gathered, there was a consensus that individuals 55 and older who have a lower SES and have experienced a TIA are at a higher risk for a recurrent stroke (Bettger et al., 2014; National Stroke Association, 2018c). Therefore, this population was targeted and lead to the development of the STOP Program. Inclusion criteria for the STOP Program included individuals who had been diagnosed with a TIA, are male or female above the age of 55, are of lower socioeconomic status, (on Medicare, Medicaid, at or below poverty level, and/or have no insurance) and have one or more modifiable risk factors for a TIA (high blood pressure, high cholesterol, tobacco smoker, history of TIA/stroke, obesity and/or diabetes mellitus). Prior to implementation of the program, an in-service was developed to educate neurologists on the purpose, benefits, and effectiveness of the program in order to obtain referrals for the occupational therapist’s facilitation of the STOP Program.

Occupational therapists (OT) are equipped with diverse skill sets to implement such preventive care services and promote healthy lifestyle modifications and routines within their scope of practice. This scholarly project was developed based on the need for this target population and to provide a detailed outline of OT’s role within this area. The STOP Program was developed based on the review of literature. From this, a detailed group protocol was created. The purpose of the group protocol was to educate individuals who have experienced a TIA and are of a lower SES. Education includes preventative strategies that can be implemented into a daily routine and reduce the risk of a recurrent TIA or a further stroke. The introduction session consisted of imparting knowledge to
participants of basic education on TIA, Act FAST (NSA, 2018a), blood pressure, and other modifiable risk factors. The second session through the sixth session included education on self-management strategies, establishment of healthy routines, community and social supports, and physical wellness. The seventh and final session included an at home follow-up visit for participants to check in on how establishing a healthy routine is going and maintaining occupational competency based on the content provided during the STOP Program.

Group sessions for the STOP Program were created based off of the MOHO and will be implemented by an OT in an outpatient setting. The MOHO was described in depth throughout the STOP Program to ensure it is properly applied during each session. MOHO has four main concepts that are an important aspect that the group protocol addressed. These concepts include volition, habituation, performance capacity, and the participant’s environment. The MOHO fits this program best because the goal is to change the participants lifestyle to a healthier one based on their risk factors associated with their TIA. The program will promote participants to develop a healthy new occupational identity through occupational adaptation and maintain their occupational competence through the MOHO.

Along with the MOHO being a guide for the STOP Program group protocol, Cole’s Seven Steps would also be implemented by the facilitating occupational therapist. Cole’s Seven Steps was used to maximize and integrate learning by group members (Cole, 2015). The steps for this process includes an introduction, activity, sharing, processing, generalizing, application and summary. The process is followed and
specifically formatted throughout the group protocol to ensure it is properly applied and maximum learning potential is achieved (Cole, 2015).

The authors took into consideration health literacy, as this tends to be lower throughout the United States and with individuals of lower SES (U.S. Department of Health & Human Services, 2008). Due to this consideration for health literacy, sessions were tailored and modified to a literacy level at sixth grade or below. The STOP Program folder was tailored and modified to a literacy level at fourth grade or below. Lastly, the pre-test and post-test were tailored to a literacy level at fifth grade or below. For the sessions, the STOP Program folder and pre-test and post-test major concepts and medical terminology were defined to hit each areas specified grade level.

Along with the consideration of healthy literacy and lower SES, a teach-back method has shown to be an effective approach for individuals to verify that information is understood (Bastable, 201). This approach was implemented during sessions to allow for participants to demonstrate and restate information in their own words to ensure an understanding of the education that was provided (Bastable, 2011). Each session was tailored to an understanding reading level for adults and matched to an appropriate health literacy rate.

The authors of the STOP Program created the product for occupational therapists to use for implementation and based it on the review of literature. The program follows an occupation-based model. Each session provides evidence-based, occupation-based and client-centered activities for adults that capture the “doing” which is embedded within the profession of occupational therapy. Chapter IV will provide the presentation of the STOP Program.
Chapter IV

PRODUCT
Secondary TIA Outpatient Prevention (STOP) Program

Addressing individuals of lower socioeconomic status
Introduction

An estimation of one half of patients fail to seek medical attention within 24 hours of having a transient ischemic attack (TIA), due to various factors (Sharry et al., 2014). Many people do not recognize their symptoms as a TIA because they are not as severe as a stroke and the symptoms resolve (Sharry et al., 2014). After a thorough literature search on this topic, research supports the early implementation of secondary TIA or stroke prevention programs that address modifiable risk factors to prevent a disabling stroke from occurring. Modifiable risk factors are controllable through lifestyle changes which include, managing physical inactivity, nutrition and diet, obesity, smoking cessation, alcohol consumption, and medication adherence to prevent a second stroke from occurring (Holzemer, Thanavaro, Malmstrom, & Cruz-Flores, 2011; Khare, 2016). More specifically, controlling and managing high blood pressure, high cholesterol, fatty foods (saturated and trans-fat), and diabetes; all of which influence one another (Mayo Clinic, 2019). In addition, prolonged stress is a predictor of heart disease and related conditions due to the release of stress hormones (Piedmont Healthcare, 2019). Stress can also weaken blood vessels which leads to plaque buildup due to unhealthy coping mechanisms of an unhealthy diet, sedentary lifestyle, smoking, and more. (Piedmont Healthcare, 2019).

The following group protocol was developed for occupational therapists to facilitate educational group sessions specifically for individuals who have experienced a TIA, are 55 and older, and of a lower socioeconomic status (SES) (Khare, 2016). Stroke rate doubles every ten years after the age of 55 and three-fourths of strokes occur after the age of 65 (Khare, 2016). This population was targeted because literature supports these individuals who are at a higher risk for a recurrent stroke. In order to target this
population, part of the product will be a presentation to neurologists to increase referrals to the *Secondary TIA Outpatient Prevention (STOP) Program*. 
**Purpose and rationale for product**

This chapter consists of the purpose of the product, the model utilized to guide the program, the layout and organization of each group session, an in-service for neurology doctors, and the final product. The *STOP Program* was designed for individuals who have experienced a TIA and are of a lower SES to help prevent a recurrent or larger stroke from occurring because this population is at a higher risk. These educational sessions will be guided by supported research and initially address education and lifestyle modifications (Khare, 2016). Life-style modifications that are included through routines and healthy habits include, managing physical inactivity, obesity, smoking, alcohol consumption, nutrition, diet, and drug abuse (Khare, 2016). In addition, Yan et al. (2016) highlighted that low to middle income countries may experience more challenges of implementation of life long treatment for chronic conditions due to health literacy and self-efficacy of these individuals is typically low. Centers for Disease Control and Prevention (2016) defines health literacy as the “degree to which an individual has the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions.” With health literacy rates being possibly low for individuals of lower SES, the delivery of information would require an understanding and teach-back method to demonstrate compliance (U.S. Department of Health & Human Services, 2008). This program also takes into account the cost-effectiveness and the need for early intervention. Therefore, the authors created the group protocol based on supporting literature of the life-style modifications discussed.

The MOHO was utilized to aide in the development of the group protocol for individuals who have experienced a TIA and who are of a low SES. This model is discussed thoroughly in the literature review and in this upcoming chapter. In addition, as
health literacy rates tend to be low with individuals of low SES, a teach-back method has shown to be an effective approach to verify information is understood (Bastable, 2011; U.S. Department of Health & Human Services, 2008). This approach allows participants to demonstrate and restate information in their own words, therefore, ensure understanding of the education provided (Bastable, 2011).
Information for the Occupational Therapist

Information on OT’s Role, Administration of STOP Program, and the MOHO
**Occupational Therapist Role:**

- Provide education on what a TIA is, symptoms, & risk factors associated to further prevent a recurrent TIA or larger stroke event.
- Facilitate the teach-back method to increase participant’s competency.
- Utilize therapeutic and clinical reasoning skills to facilitate healthy lifestyle modifications and enhance participant outcomes.
- Apply MOHO concepts throughout each STOP Program session.

**Timing of Administration:**

This product was created for the implementation of six group sessions that each last one hour and a half in length; all time may not be necessary for all the therapy sessions. The seventh session is an at home follow-up session that will last 45 minutes.

The STOP Program group protocol was developed with seven sessions to facilitate participation and impart education to participants. The implementation of this program is intended to take place for three weeks through the facilitation of an occupational therapist in an outpatient setting; session seven is a follow-up session a month later in the participants’ home. All seven group sessions were developed utilizing Cole’s Seven Steps to allow for participants to reach the fullest potential of learning and for group cohesiveness (Cole, 2012). Based on the participants, each session can be adapted and modified to meet the goals of the group session.
<table>
<thead>
<tr>
<th>Cole’s Seven Steps</th>
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<tbody>
<tr>
<td><strong>Step 1: Introduction</strong></td>
</tr>
<tr>
<td>- Introduction: therapist introduces self, name of group, and greet group members.</td>
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<tr>
<td>- Warm-up: captures groups attention, relaxes them and prepares them for the experiences to follow.</td>
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<tr>
<td>- Set the mood: how the therapist expresses themselves and their manner of speaking.</td>
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<tr>
<td>- Expectation of the group: therapists are the role model for the group members</td>
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<tr>
<td>- Explaining the purpose clearly: state the goals of the group sessions, should be outlined in the initial session and objectives of the session should be explained clearly.</td>
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<tr>
<td>- Brief outline of the session: includes the time frame, materials and procedures that are included in the session.</td>
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<tr>
<td><strong>Step 2: Activity</strong></td>
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<tr>
<td>- Timing: last no longer than one third of the total session.</td>
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<tr>
<td>- Therapeutic goals: goals include the desired outcome of the session and should meet the needs of most of the group members.</td>
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<tr>
<td>- Physical and mental capacities of the members: consider their deficits if there are any.</td>
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<tr>
<td>- Knowledge and skill of the leader: what activities are the leader familiar with and which ones can they adapt too.</td>
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<tr>
<td>- Adaptation of an activity: therapist should be able to complete an activity analysis and synthesis.</td>
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<tr>
<td><strong>Step 3: Sharing</strong></td>
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<tr>
<td>- Members are invited to share their own work or experience with the group. Each members contribution is acknowledged.</td>
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<td><strong>Step 4: Processing</strong></td>
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<tr>
<td>- Member express how they feel about the experience.</td>
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<td>- Feelings of the participants will guide their behavior.</td>
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<td>- Discussion of the nonverbal aspects of the group and underlying issues.</td>
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<tr>
<td><strong>Step 5: Generalizing</strong></td>
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<tr>
<td>- Therapist reviews group responses and sums them up with general principles.</td>
</tr>
<tr>
<td>- Therapist points out similar and different responses.</td>
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</table>
### Step 6: Application

- Therapist helps group understand how principles learned can be applied to everyday life.

### Step 7: Summary

- Verbally emphasize the most important aspects of the group so the group members will be understood correctly and remembered.

(Cole, 2012)

## Session Outlines

### Education on Transient Ischemic Attack and stroke

- This session provides a thorough education on stroke and TIA of what it is, statistics, and risk factors associated with it.
  - Modifiable and non-modifiable risk factors.
- A speaker who has had a stroke will come into the session to share their story and emphasize the importance of identifying modifiable risk factors to prevent a recurrent TIA or a stroke.
- Participants will create their own goals for the program.
- Participants will take a pre-test to determine current TIA education and knowledge, self-management skills, current routine, social and community supports, wellness and other areas related to the STOP Program.
- Blood pressure will be discussed in all sessions, due to it being a modifiable risk factor that should be checked daily.

### Self-management

- Education will be provided on what self-management is, how to improve self-management skills, and how they relate to creating a healthy routine and preventing a recurrent stroke.
- Medication management will be discussed, as well as the importance of medication compliance after a TIA for prevention of a recurrent TIA and a stroke.
- Pharmacist will come and discuss the participants’ medications, the purpose, side effects, and importance of following a medication routine.
| **Stress management** | ● Education will be provided on what stress looks like, differentiate between good and bad stress, ways to manage stress, and how stress is associated to modifiable risk factors of a TIA.  
● Stress management strategies will be practiced to implement into their daily routine to reduce stress. |
| **Healthy eating habits** | ● Patients will engage in a meal preparation session that focuses on time management, stress management and meal preparation.  
● The participants will create one healthy meal for peers.  
● Participants will be provided with handouts on low cost foods and healthy foods, as well as a meal preparation calendar for them to plan their next week of meals. |
| **Community and social support resources** | ● Participants will be provided education on community and social support which include: transportation, physical wellness, food shelves, social supports, free applications to assist with coping, and meal preparation.  
● Participants will then engage in a BINGO game and discussion to promote those areas discussed prior and to determine which ones they will implement when they are at home or trying to create a new routine. |
| **Physical wellness** | ● During this session, participants will attend a session at a local gym and participate in a 20 minutes session with an Athletic Trainer.  
● Participants will create a workout schedule and determine daily activities that increase their heart rate and promote physical wellness.  
● Patient will take the post-test for the STOP Program. |
| **At home follow-up** | ● Identify potential barriers to following through and maintenance of healthy lifestyle  
● Focuses specifically addressing occupational competency and occupational adaptation in areas addressed within the STOP Program |
Model of Human Occupation

The Model of Human Occupation (MOHO) was created to determine how a person functions based on motivational factors, life patterns, individuals’ abilities and environmental influences (Clifford O’Brien, 2017). This model is a practice-oriented, occupation-focused, client-centered, holistic and evidence-based (Kielhofner, 2008). The group protocol for the STOP Program was created based off of the MOHO. As occupational therapists use the group protocol guided by MOHO, therapists are implementing evidence and occupation-based practice (Clifford O’Brien, 2017).

Major Concepts of MOHO

<table>
<thead>
<tr>
<th>Concepts of the Person</th>
<th>Definition</th>
<th>Components</th>
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</thead>
<tbody>
<tr>
<td>Volition</td>
<td>Refers to the individuals need, desire, feeling and thoughts toward and what they choose to do or engage in. (Taylor &amp; Kielhofner, 2017)</td>
<td><strong>Personal causation:</strong> An individual's awareness of their capacities and efficacy of their skills. <strong>Values:</strong> Beliefs and commitments based on what is good and important. <strong>Interests:</strong> Tendency to enjoy an occupation that comprises of either an intellectual or physical challenge. (Clifford O’Brien, 2017)</td>
</tr>
<tr>
<td><strong>Habituation</strong></td>
<td>Patterns and routines an individual engages in efficiently and automatically, may include familiar temporal, physical and social habits. (Taylor &amp; Kielhofner, 2017)</td>
<td><strong>Habits:</strong> Automatic ways of doing occupations in familiar environments. (Taylor &amp; Kielhofner, 2017) <strong>Roles:</strong> How an individual identifies themselves based on what they do and find meaningful. (Clifford O’Brien, 2017)</td>
</tr>
<tr>
<td><strong>Performance Capacities</strong></td>
<td>How an individual's performance is affected based on mental or cognitive abilities, as well as bodily systems, such as: musculoskeletal, neurological, cardiopulmonary and other systems. (Taylor &amp; Kielhofner, 2017)</td>
<td></td>
</tr>
<tr>
<td><strong>Other Concept</strong></td>
<td><strong>Definition</strong></td>
<td><strong>Components</strong></td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>Different contexts influence how the volition, habituation and performance capacity are affected. (Clifford O’Brien, 2017)</td>
<td><strong>Social Context:</strong> Group of people and their rules and guidelines. <strong>Physical Context:</strong> Natural and human-made spaces and objects within them. (Clifford O’Brien, 2017)</td>
</tr>
</tbody>
</table>
Other Key Terms of the MOHO

**Activity Choices:** Making the choice to begin or end an activity to fill a person's hours, days and weeks or whether to make the activity permanent (Taylor & Kielhofner, 2017).

**Interests:** Things people enjoy or are satisfied by, including anticipation, choosing, experiencing and interests (Taylor & Kielhofner, 2017; Turpin and Irwin, 2011).

**Lived body experience:** How an individual performs based of feelings, tastes, opinions [subjective experiences] (Clifford O’Brien, 2017).

**Motivation:** Belief in one’s abilities (Clifford O’Brien, 2017).

**Occupational adaptation:** When an individual achieves a positive occupational identity and gains occupational competence over time in their own environment (O’Brien & Kielhofner, 2017).

**Occupational Choice:** Commitment to a role or action and sustaining that over a period of time (Clifford O’Brien, 2017).

**Occupational Competence:** An individual's ability to participate in occupations, roles, routines that reflect their occupational identity (O’Brien & Kielhofner, 2017).
**Occupational Forms:** Opportunity and demands, sequence, rules and guidelines of a performed action (Taylor & Kielhofner, 2017; Clifford O’Brien, 2017).

**Occupational Identity:** What a person does is a reflection of what the person has done in the past and what they hope to become as an occupational being (O’Brien & Kielhofner, 2017; Clifford O’Brien, 2017).

**Participation:** When an individual engages in work, play or activities of daily living that are a part of the participants context or necessary for their well-being (Clifford O’Brien, 2017).

**Performance:** How an individual is able to do and occupational form or task to engage in what they are participating in (Clifford O’Brien, 2017).

**Role Identification:** Individual believes they have the appropriate behaviors and skills for a given role (Clifford O’Brien, 2017).

**Reconstructing Life:** Moving from the known to unknown within roles and habits, after a new altered condition (Clifford O’Brien, 2017).

**Skills:** Discrete, observable, goal-directed actions that are used during an occupational performance (Clifford O’Brien, 2017).
The figure below demonstrates how the MOHO will guide the Secondary TIA Outpatient Prevention Program.


Refer to Appendix A for landscape view of handout
**MOHO Therapeutic Strategies**

**Advising:** Making recommendations to the individual based off intervention goals and strategies.

**Coaching:** Instructing, demonstrating, guiding, verbally and/or physically prompting for improvement in individual’s performance.

**Encouraging:** To provide assistance with engagement in occupation through providing emotional support and reassurance.

**Giving Feedback:** Demonstrating an understanding of a client's situation and using communication skills to respond appropriately.

**Identifying:** Recognizing personal, environmental, or procedural factors that will promote engagement in occupation.

**Negotiating:** Collaborating with clients for improvement in engagement and achievement in occupations to achieve a common perspective or agreement.

**Structuring:** Establish parameters, such as choices, setting limits and forming group rules, to treatment interventions.

**Validating:** Acknowledging the client's experiences and perspective with respect.

(Kielhofner & Forsyth, 2008)
MOHO Application

The *STOP Program* group protocol will address the major concepts of the Model of Human Occupation while considering the impact a transient ischemic attack has on an individual of lower socioeconomic status. The initial session and assessment will allow the facilitating occupational therapist to gather general information about each participant regarding each of the major MOHO concepts. Major topics were predetermined; however, MOHO is used as a guide for each session.

MOHO Assessments

The Model of Human Occupation is the guiding model of the *STOP Program*. This means it is the focus throughout the pre-test and post-test (located in Appendix B) and other optional assessments. Each assessment will gather information on the client’s volition, habituation, performance capacity and the environment. With the information gathered, the facilitating occupational therapist can provide a more accurate and educational group session. The pre-test and post-test, located in Appendix B, is an assessment that will be provided to patients the first day of the *STOP Program*. This assessment outlines the major concepts of MOHO.
ALTERNATE MOHO ASSESSMENTS

The facilitating occupational therapist may elect to include additional assessments on initial handout if they feel the handout does not provide adequate information. If the facilitating occupational therapist chooses to use additional assessments, the following assessments may be utilized:

- **Interest Checklist**
  - Determines a patient's motivation to participate, strength of interests and activities that they enjoy participating in (Clifford O’Brien, 2017).

- **Occupational Self-Assessment (OSA)**
  - Provides the therapist client-centered information about the patient's values concerning themselves, personal competencies, their environment and the impact of the environment. The OSA allows comparisons of what the client values with how competent the client feels about everyday activities (Clifford O’Brien, 2017).
Session One

Introduction and education for the STOP Program
**Layout of group session:**
Allow for 1 hour and 30 minutes for session, however all time may not be necessary
- Welcome participants: 2 minutes
- Go over group objectives: 2 minutes
- Introduce *STOP Program*, expectations, and complete the pre-test assessment: 15 minutes
- Warm-up: 5 minutes
- Activity: 45 minutes
- Sharing: 5 minutes
- Discussion: 10 minutes
- Summary/group wrap up: 5 minutes

**Supplies:**
- *STOP Program* folder (Appendix B) which includes all handouts for each session. For session one, this includes: TIA fact sheet and blood pressure monitor chart.
- Blood pressure cuffs
- Writing utensils
- Enough chairs for participants and tables
- Zip lock bag

**Group membership:** This group (6-8 individuals) will take place in a quiet, small room that is set up in a circle format to facilitate discussion for participants above 55.

**Objectives:**
- Participants will be able to name their own modifiable (controllable) risk factors. *(habituation)*
- Participants will be able share with a partner what a TIA is and how it has/has not had an impact. *(habituation, performance capacity, environment)*
- Participants will discuss what motivates them to establish a healthy lifestyle. *(volition)*

**MOHO therapeutic strategies utilized throughout therapy session:**
- Encouraging, identifying, negotiating, structuring, validating

**Incentive for this session:** Healthy snack provided and blood pressure monitoring chart.
Session Structure:

**Introduction**

- The facilitator of the group (OT) will introduce self, what occupational therapy is/what we do (elevator speech), and go around the circle and have each member introduce themselves. The therapist will then begin by going over the expectations of the group.
  - “During the group, each person should engage in the activity and respect one another. What is talked about during group is not allowed to be talked about after the group session ends (confidential).”

- The therapist will go over the purpose of the STOP Program:
  - “It has been shown there is a need for the early secondary prevention programs that address TIA or stroke. They are cost-effective, there are less hospital visits and there is a decreased chance of having a disabling stroke or second TIA.”
  - “The goals of the STOP Program are to create a healthy routine and provide needed education to stop a second transient ischemic attack (TIA) or a disabling stroke.”

- Discuss the layout of session:
  - “During this session you will make your own goals for the program, there will be an activity that talks about education for a TIA and watching blood pressures. A special guest will speak about their experience with a TIA (individual who experienced a TIA then a further disabling stroke: therapist is in charge of finding this individual prior to session). Then, you will talk about the activity we did and the speaker. Are there any questions before we begin?”
  - Explain terms and concepts that may be difficult for participants to understand.
    - Example: Routine = a pattern that you follow everyday (brushing teeth, taking a shower, eating breakfast, etc.)
  - A teach-back method will be utilized throughout the program.

- The OT will have each participant complete the pre-test handout within the STOP Program folder (Appendix B). It will be read aloud and take about 6-10 minutes to complete. Participants are allowed to ask questions throughout the pre-test for clarification.
• Warm up question prior to beginning activity:
  ○ “Why did you have a TIA?”
  ○ “What symptoms did you notice when you had your TIA?” OR “What did you notice change when you had your TIA?”

Activity

This activity will consist of education being provided on TIA and stroke with the below information. The therapist can write information on a whiteboard, provide visuals, demonstrations, or videos in addition. Once the education has been provided, a guest speaker (an individual who has experienced a full stroke) will come in and share their experience.

• 1st step to activity-Education:
  ○ Spend 15 minutes for part one of the activity.
  ○ The facilitator will refer participants to “TIA Fact Sheet” handout in STOP Program folder (Appendix B). Additional information is provided below. Facilitator should use as they feel necessary and adjust to participants literacy and educational levels for an appropriate learning environment.
  ○ Optional/recommended video:
  ○ Transient Ischemic attack (TIA): is also called a “mini stroke”, “warning stroke” or “ischemic attack” and comes before a larger stroke event.
    (American Stroke Association, 2018b)
    ■ Signs and symptoms: slurred and garbled speech (difficult understanding), dizziness, loss of balance and/or coordination, blindness in one or both eyes, or double vision, sudden and/or severe headache onset with no known cause, weakness, numbness and/or paralysis in arm or leg on one side of body.
    (Mayo Clinic, 2019)
  ■ What happens when a TIA occurs: The blood flow to the brain stops for an average of one to five minutes and mimics stroke symptoms, however these symptoms last less than 24 hours
    (National Stroke Association [NSA], 2018b)
  ■ “Studies have showed this is the number of strokes that happen in U.S. each year”:  

56
Statistics: Roughly 795,000 or more Americans have a stroke each year; 610,000 of these individuals have one for the first time each year. Of this about 185,000 Americans have another (recurrent) stroke.
  ○ Roughly that is 1:4 individuals
  
  (Benjamin et al., 2017)

200,000 to 500,000 TIAS are diagnosed annually (1 time per year) in the U.S.

(Khare, 2016)

Risk factors for a stroke/TIA:

- Cannot change: family history, sex, age, race, sickle cell disease and/or prior TIAS
- Steps to control risk factors: blood pressure, high cholesterol, physical activity, weight, smoking cessation, drinking, drug usage, nutrition, and managing diabetes.
  ○ “Modifiable and controllable will be used during the program when talking about risk factors. Both of these words can be used and mean the same thing. Modifiable (Controllable) means that you can be change to live a better, healthier lifestyle and hopefully stop a second TIA or a stroke.”
  (Mayo Clinic, 2019)

FAST: How to recognize or know if someone is having a stroke:

“Wherever you are if you think you or someone you are with is having a stroke, follow the FAST steps”. Refer to TIA Fact Sheet within STOP Program folder (Appendix B).

- Face: Ask the person to smile and look to see if one side of their mouth falls (droops)-demonstrate OR show picture
- Arms: Ask the person to raise their arms; look to see if one falls quicker than the other or if they cannot raise an arm at all- demonstrate
- Speech: Ask person to say simple sentences and listen for slurred speech or a change in the person's speech-demonstrate by saying “The sky is gray”
- Time: call 9-1-1

(NSA, 2018a)
Before step two of activity: Have members teach-back, to a partner, what a TIA is to verify and ensure participants understand.

- **2nd step to activity- Guest speaker:**
  - Spend 15 minutes for part two of the activity.
  - Provide a warm welcome and introduction for guest speaker.
  - Guest speaker shares their experience with group members.
    - Have the guest speaker highlight and discuss modifiable (controllable) risk factors in their life that they could have done for prevention and their lifestyle choices.

- **3rd step to activity-Blood Pressure:**
  - Spend 10 minutes checking and explaining blood pressure, for step three of the activity.
  - Discuss why this is important to monitor:
    - “Blood pressure is one of the main modifiable risk factors after a TIA. For each session we will start by checking blood pressures. You will check and record your blood pressure over the course of the STOP Program. High blood pressure is when the force of the blood against the walls of your blood vessels (what carries your blood through the body) is too high. High blood pressure is linked with the chance of having a TIA and the risk for a larger stroke. Normal blood pressure ranges from 120 (systolic) over 80 (diastolic), whereas high blood pressure ranges are 130 and above (systolic) over 80 and higher (diastolic).”
    - Systolic: the pressure in your arteries when the heart muscle contracts
    - Diastolic: the pressure when your heart is between beats

(American Heart Association [AHA], 2019; Zhang, Cadilhac, Donnan, Callaghan, & Dewey, 2009)

- Go over monitoring blood pressure monthly chart handouts in STOP Program folder (Appendix B). These charts are for participants to monitor their blood pressure for the next three months to create a healthy lifestyle routine. Explain that to participants and answer any questions.
• **4th step to activity- Participants goals:**
  ○ The facilitator will have participants write down 1 or 2 modifiable risks factors they can work on and 2 to 3 goals in the “STOP Program Goal Sheet” handout provided in STOP Program folder (Appendix B)
  ○ The goals will focus on what they wish to accomplish and learn during the STOP Program.

**Sharing**

• “Now we will talk about the activity and you will have time to share your thoughts on it.”

• Questions for discussion:
  ○ “Share one goal you made for the program?” (volition)

**Processing**

• Questions for discussion:
  ○ “What feelings do have after hearing the speaker’s story?”
  ○ “What are symptoms that you had during your TIA?”
  ○ “What changes have you noticed in your daily routines since your TIA, could be positive or negative?” (environment, habituation, volition)
  ○ “What are risk factors that you want to control in your daily life?” (volition)
  ○ “What supports or things at home make you want to be healthy?” (environment)

**Generalizing**

• Questions for discussion:
  ○ “What were two similar concerns about modifiable risk factors that were talked about within the group?”
  ○ “What were two common warning signs people had during their TIA?”

• Key principles of this session:
  ○ Participant will understand FAST to identify future a stroke or TIA.
  ○ Participants will identify modifiable (controllable) risk factors associated to themselves.
Application

- The facilitator will discuss the importance of the education activity and the speaker.
  - “The importance of this activity was to give education to everyone on what a TIA is, the risk factors of a TIA, sign and symptoms related to a TIA, and have everyone teach-back the information to their partner to make sure to better understand TIA education. The speaker was here to help show everyone what can happen when a person does not try to control and make changes to those modifiable risk factors.”

- Questions for discussion:
  - “How are you going to change your daily routine to work on your modifiable risk factors?” (habituation, volition)
  - “How will you check your blood pressure before the next session?” (habituation, volition)

Summary

- As the session comes to an end, the facilitator will ask: “Are there any questions on today’s session or for the next session? Is there anything you guys want to go over again that was talked about today?”

- Emphasize important points that were talked about during this session:
  - “In today’s session we talked about what a TIA is, the need of changing your lifestyle to control modifiable risk factors for a recurrent TIA or a stroke, and the importance of monitoring blood pressures. We also talked about how we can control certain factors with a TIA.”
  - Review of objectives
    - “Participants will be able to identify their own controllable (modifiable) risk factors”. (habituation)
    - “Participants will be able share with a partner what a TIA is and how it has/has not had an impact.” (habituation, performance capacity, environment)
    - “Participants will discuss what motivates them to establish a healthy lifestyle.” (volition)
  - Thank all the members for participating in group and validate their input.
  - The facilitator will address the **homework** for the next session:
    - **Therapist:** Set up time for the next session to have a pharmacist come in and talk to the participants on medications.
■ **For participants:** Provide a plastic zip lock baggie with their name on it to put their medications in it for the next session.

■ Have participants come to the next session with any questions that they may have for the pharmacist on their medications.

■ Homework for participants for next session—identify one change they made to their daily routine based on today’s session and to check blood pressure.

**Application of the MOHO**

- In step 4 of the activity, participants identified their own modifiable risk factors which addressed *habits* and *routines* through the goal handout provided.

- In the application section, participants discussed and reflected on what *volitional* factors were needed to establish a healthy lifestyle during the discussion.

- In the processing section, participants discussed with group members whether their *performance capacity* has been impacted after experiencing their TIA.
INSTRUCTOR KEY

STOP Program Pre-test
Secondary TIA Outpatient Prevention Program

The instructor has a different copy in comparison to the participants’ copy. The instructors copy provides the target areas of MOHO behind each question. The purpose of two individual copies was intended to address any low health literacy rates and to ensure the pre/post-test was user friendly.

Administration instructions:

- Step 1: State the instructions to ensure participants understand it is important for them to ask questions if there are any.  
  - Instruction: “Prior to starting the STOP Program, I am going to have each of you work on completing this short handout. This looks at your current understanding of your “mini stroke” also known as a transient ischemic attack and how this relates to your everyday life. I want you to be truthful, because at the end of the STOP Program we will look at this worksheet again and see if you have made or noticed any changes. I will be reading these question out loud and ask for you all to ask questions if there is anything you do not understand. I know sometimes question about a topic that is unfamiliar can be more difficult, therefore you all should feel it is alright to ask questions.”
- Step 2: Hand out worksheet (do not hand out worksheet until initial instructions are provided)
- Step 3: Read questions out loud and answer questions as if participants ask.
**Transient Ischemic Attack education:**

1. On a scale of “not at all” to “very much”, how well do you understand what a transient ischemic attack is? (environment)

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<tr>
<th>Not at all (1)</th>
<th>Somewhat/Very Little (2)</th>
<th>Very Much (3)</th>
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2. On a scale of “not at all” to “very much”, how well do you understand the chance of having a stroke after a transient ischemic attack?

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**Self-Management:**

3. On a scale of “not at all” to “very much”, how well are you watching your health needs? (performance Capacity)

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4. On a scale of “not at all” to “very much”, how often is it hard to follow your daily routine? (habituation, performance capacity)

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**Healthy Routine:**

5. On a scale of “not at all” to “very much”, how well are you in charge of your stress levels? (performance capacity)

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6. On a scale of “not at all” to “very much”, how likely are you to create a healthy routine? (Volition; habitation)

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**Social and Community Supports:**

7. On a scale of “not at all” to “very much”, how important do you think it is to reach out to people who support you? (volition)

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8. On a scale of “not at all” to “very much”, how comfortable are you reaching out to others for support? (performance capacity)

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Wellness:

9. On a scale of “not at all (0 days)” to “very much (5-7 days)” How often are you active during the week? (habituation)

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<th>Not at all (1)</th>
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10. On a scale of “not at all” to “very much”, how important do you think it is to do physical activity after a transient ischemic attack? (volition)

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Other

11. How do you feel this education course will change you?

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12. How do you get around? (Circle all that apply)
   a. Car
   b. Bus
   c. Cabs
   d. Walking
   e. Another person drives me
   f. Other: _________________________________________________
Session Two

Self-Management
Layout of group session:
Allow for 1 hour and 30 minutes for session, however all time may not be necessary
- Review of last session: 2 minutes
- Go over group objectives: 2 minutes
- Introduce group session, go over expectations, check blood pressures: 15 minutes
- Warm-up: 5 minutes
- Activity: 40 minutes
- Sharing: 5 minutes
- Discussion: 15 minutes
- Summary/group wrap up: 5 minutes

Supplies:
- STOP Program folder (Appendix B) which includes all handouts for each session. For session two, this includes: medication management handout, blood pressure monitor chart, self-management skills fact sheet, and medication planner handout.
- Blood pressure cuffs
- Writing utensils
- Enough chairs for participants and tables

Group membership: This group (6-8 individuals) will take place in a quiet, small room that is set up in a circle format to facilitate discussion for participants above 55.

Objectives:
- Participants will be able to define self-management.
- Participants will be able to identify 2 self-management strategies that they want to implement into their daily routine or environment. (habituation, volition and environment)
- Participants will be able to identify 2 important purposes of medication compliance (taking their medications on-time).
- Participants will identify 2 self-management tasks they have difficulty completing at least once a week. (performance capacity)

MOHO therapeutic strategies utilized throughout therapy session:
- Advising, coaching, encouraging, identifying, structuring, negotiating, validating

Incentives for this session: Healthy snack, weekly medication planner handout and med box with morning, noon, evening and bedtime sections.
Session structure:

Introduction

- “In the last session, we talked about what a TIA is, modifiable risk factors, and the importance of checking your blood pressure. Today we are going to talk about self-management.”

- The facilitator (OT) will introduce the topic of the group session, introduce self, and go over the objectives listed above.

- The therapist will then begin by going over the expectations of the group:
  - “During the group, each person should engage in the activity and respect one another. What is talked about during group is not allowed to be talked about after the group session ends (confidential).”

- Discuss the layout of the session:
  - “For today’s session, we will check everyone’s blood pressure and write down your numbers in the blood pressure monitor handout in STOP Program folder (Appendix B). Then we will do an activity on self-management of medications and talk about it. Are there any questions before we begin?”

- Check blood pressures and record number values onto the blood pressure handout discussed in session 1 and located in STOP Program folder (Appendix B).

- Warm up questions:
  - “When you hear self-management, what do you think of or what comes to mind?”
  - “What are some reasons why you should take your medications on time?”

Activity

- For this group, the OT will explain the definition of self-management and then have the participants explain to a partner what it means to them (use a teach-back method to demonstrate understanding).

- The OT will address:
  - “For this group some people may be excited to learn about their medications and ask questions, some may already know about their
medications and the purpose of them, and others may not be interested in learning about their medications at all. For all of your benefit, we have invited the pharmacist to come talk about medications because it is shown that taking your medications on time is important. If any of you want to learn more about other areas besides medications, like nutrition, more contact information can be given to you. For those of you who may have more questions and want to know more about their medications, we can make time outside of the group session to talk.”

● The 1st step to the activity:
  ○ “This group activity will be on self-management and medication management. We will have a pharmacist come in and talk about common medications for people who have had a TIA. Self-management is when you choose to do something about managing your modifiable risk factors, to make a healthy routine. Along with that you may choose to make good habits or not to do anything at all. This is your choice of whether or not you want to do something.”

    (Lorig et al., 2012)

  ○ Education of self-management skills handout in STOP Program folder (Appendix B): The OT facilitator will go over this handout, read it out loud, answer questions related to skills, and have each participant identify one self-management skills that stands out to them.

  ○ Education of an Action Plan:
    ■ “An action plan allows for you to strengthen your ability to rely on yourself or something. This will guide you to positive results when managing your symptoms and creating a healthy lifestyle.”

    (DeRosa, 2013)

  ○ The facilitator will go over the worksheet and have participants identify their own action plan, to establish a healthy routine and to empower individuals of their own self-management.

● After education is provided on self-management, the OT will then have the participants set up a week’s worth of their own medications in the medication
box. As well as, fill out their medication planner in the STOP Program folder (Appendix B).

- “Doing a medication routine helps to lower symptoms of another TIA, it may decrease the chance of more symptoms happening, and slow the chance of another TIA.”

(Lorig et al., 2013)

- The therapist will offer potential deficits that can make medication compliance more difficult (Example: weak fine motor skills, not understanding the labels and what is being asked and/or abbreviations, visual deficits, etc.)
- Participants will demonstrate competency through the teach-back method of reading labels on their prescriptions by explaining to the therapist what a medication means prior to placing the medication in the medication box.
- Each group member will be provided a medication planner in STOP Program folder (Appendix B) and medication box to improve medication compliance.

For the 2nd part of this activity:
- Welcome the Pharmacist. For this group, the pharmacist will go over common medications provided after someone experiences a TIA and how different medications work together, common side effects, answer participants’ questions, and provide any other information on medications.
  - Essentially, this will be a question and answer session for participants and pharmacist.
- Request for pharmacist to provide a business card be provided for each group member.

Sharing

- “Now we will talk about the activity and you will have time share your thoughts on it.”
- Question for discussion:
  - “What are self-management skills that you already do at home?”
**Processing**

- Questions for discussion:
  - “What are your thoughts on how you can control your risk factors?” (ex: frustrated, bored, it was easy) (volition)
  - “How do you feel you are doing at home with following your medication routine?” (habituation, volition)
  - “What steps do you need to take to follow a healthy routine?” (volition)
  - “What are some barriers (things get in the way of doing) at home that could make it difficult to follow a medication routine?” (environment, performance capacity)

**Generalizing**

- Questions for discussion:
  - “What are two self-management skills that the group learned from this activity?”
  - “What are two common reasons that following a routine with your medications is important?”
- Key principles of this session:
  - Participants will understand self-management and discuss strategies they want to implement.
  - Participants will understand the purpose and benefits for medication compliance.

**Application**

- The facilitator will go over the importance of self-management and medication compliance:
  - “This activity was done so each of you can take control of your own decision making, set goals for yourself, and know how you will reach them. We also talked about the importance of taking medications.”

- Questions for discussion:
  - “How can you use a medication planner and/or box in your daily routine next week?” (habituation)
  - “Where can you place your medication box that is a safe place and reminds you to take your medications on time?” (environment)
Summary

- Emphasize the important points and ask if there are any questions and/or clarifications needed about today’s session.
  - “Today we talked about what self-management means, skills to practice self-management, ways to follow your own goals, developed an action plan, and why you should take your medications after having a TIA.”
  - Review of objectives:
    - “Participants will be able to define self-management.”
    - “Participants will be able to identify 2 self-management strategies they want to implement into their daily routine or environment.” (habituation, volition and environment)
    - “Participants will be able to identify 2 important purposes of medication compliance (taking their medications on-time).”
    - “Participants will identify 2 self-management tasks they have difficulty completing at least once a week.” (performance capacity)
  - Thank all the members for participating in the group session and validate their input.
  - **Homework** for session 3: Follow through with medication planner handouts
    - Therapist needs to make sure participants come to the next session with a list of their allergies in preparation for session 4.

Application of the MOHO

- In the generalizing section, participants identified the importance of following a medication schedule which addressed habits and routines through discussion.

- In the application section, participants reflected on what volitional factors to practice and work on to improve self-management skills, through discussion.

- In the processing section, participants identified environmental factors that will support their performance capacity for medication compliance through discussion.
Session Three

Establishing healthy routines and addressing barriers
**Layout of group session:**

*Allow for 1 hour and 30 minutes for session, however all time may not be necessary*

- Review of last session: 2 minutes
- Go over group objectives: 2 minutes
- Introduce group session, go over expectations, check blood pressures: 15 minutes
- Warm-up: 5 minutes
- Activity: 45 minutes
- Sharing: 5 minutes
- Discussion: 10 minutes
- Summary/group wrap up: 5 minutes

**Supplies:**

- Blood pressure cuffs
- Writing utensils
- Enough chairs for participants and tables
- STOP stress worksheet located in the *STOP Program* folder (Appendix B)
- Blood pressure chart located in the *STOP Program* folder (Appendix B)

**Group membership:** This group (6-8 individuals) will take place in a quiet, small room that is set up in a circle format to facilitate discussion for participants above 55.

**Objectives:**

- *Participants will identify 2 coping skills to use when stressed.* (habituation)
- *Participants will identify 2 barriers that make it hard to follow through and keep up with healthy routines.* (motivation)
- *Participants will identify 2 warning signs for when they are becoming stressed.* (performance capacity)

**MOHO therapeutic strategies utilized throughout therapy session:**

- Validating, encouraging, advising, coaching, identifying, structuring, and giving feedback

**Incentives during this session:** Healthy snack
Session structure:

Introduction

● “In the last session, we talked about what self-management is and some skills to practice, along with why you all should follow a medication routine. Today we are going to talk about how to take care of your stress. Before we start, how did you use your medication planner and/or medication box since our last meeting session.” (Spend a few minutes discussing this)

● The facilitator (OT) will introduce the topic of the group session, introduce self, and go over the objectives. Then the facilitator will go over the expectations:
  ○ “During the group, each person should engage in the activity and respect one another. What is talked about during group is not allowed to be talked about after the group session ends (confidential).”

● Check blood pressures and record number values on monthly blood pressure sheet from STOP Program folder (Appendix B). Collect the participant’s list of allergies.

● Warm up:
  ○ “What are some stressors (something that causes tension or strain) in your life?”, “What do you do to take care of your stress?”

Activity

● “For our activity today, we are going to be talking about stress. What do you feel like when you are stressed?” (Spend less than 5 minutes discussing this in the group)
  ○ The facilitator will provide education on the physiological and psychosocial symptoms of stress:
    ■ “These are examples of how your body may respond when you feel stressed or something stressful happens in your life”:
      ● Physiological: Dry mouth (swallowing problems), difficulty breathing, rapid pulse, frequent urination, weight gain or weight loss, and high blood pressure
    ■ “These are examples of how a person might “cope” (meaning how they handle or take care of their stress) or what may happen during daily tasks while feeling stressed.”
      ● Psychosocial: excessive anxiety, worry and/or guilt, increased frustrations, increased smoking and/or drinking
alcohol (that develop into unhealthy habits), concentrating, forgetfulness, little interest in activities, difficulty making decisions, or excessive crying.

(American Institute of Stress, 2019)

- After discussing the symptoms of stress, “How do you think stress is related to a TIA?”
  - When you are stressed, the body releases stress hormones (adrenaline & cortisol) into your blood which causes your heart to beat faster and raises blood pressure. Prolonged stress continues this process, which impacts your blood pressure, leading to a recurrent TIA or a stroke. This is why blood pressure is an important modifiable risk factor.

(American Heart Association, 2016)

- The facilitator will discuss positive versus negative stress, then have participants share examples of what good and bad stressors are in their life:
  - Example:
    - “Good stress drives you to get things done on time, alerts you, and lasts a short amount time.”
      - This can include: assignment deadlines, starting a new job or returning from a job, taking time off for recovery, taking educational classes related to TIA, holiday seasons, and more.
      - Positive coping skills: going for walks, coloring, journaling, exercising, talking with friends and spending time with family
    - “Bad stress overwhelms (gives you too much to do/feel) you, occurs for a long time (chronic/prolonged), makes you feel a difference physically and mentally, and may cause illness.”
      - This can include: death of a spouse, loss of loved ones, finances, unemployment, sleep issues, injury, illness, and more.
      - Negative coping skills: smoking, excessive eating, drinking, and more.
        - Smoking increases the risk of forming blood clots and may lead to a TIA or stroke.

(American Institute of Stress, 2019)
The facilitator will go over and discuss the “STOP Stress: Know your warning signs” worksheet located in the STOP Program folder (Appendix B), having participants provide their own examples of triggers, warning signs, barriers, and coping skills. The purpose of this is to help participants identify their own triggers, warning signs, barriers, and coping skills. (Spend approximately 30 minutes doing this activity)

- Red stop sign is participants triggers to stress: things that always cause individual to experience stress
  - Therapist example: bill paying week, finances, grocery shopping, kids having multiple events throughout the week to attend, work related stress, school, and more.

- Yellow stop sign warning signs and barriers when getting stressed: What you begin to feel when getting stressed (warning signs), and what stops you from feeling better when stressed (barriers)
  - Therapist example (warning signs): beginning to feel physiological symptoms (ex. stuffy nose, tired, stomach ache).
  - Therapist example (barriers): setting time aside for yourself and money.

- Green stop sign: coping skills they would like to implement
  - Working out, meal preparation, deep breathing etc.

  **Take time to practice one technique from the list of options to demonstrate understanding (facilitator can choose other preferred methods if they want too):**

- Links are provided for options to use. Adapt activities as necessary for participants and their abilities.
- Deep/square breathing
  - [https://www.healthlinkbc.ca/health-topics/uz2255](https://www.healthlinkbc.ca/health-topics/uz2255)
  - [https://www.healthline.com/health/box-breathing#getting-started](https://www.healthline.com/health/box-breathing#getting-started)

- Progressive muscle relaxation
  - Video: [https://www.youtube.com/watch?v=86HUCX8ZtAk](https://www.youtube.com/watch?v=86HUCX8ZtAk)

- Guided imagery

- Meditation/yoga
  - [https://www.youtube.com/watch?v=v7AYKMP6rOE](https://www.youtube.com/watch?v=v7AYKMP6rOE)
Sharing

- “Now we will talk about the activity and you will have time to share your thoughts on it.”
- Questions for discussion:
  - “What are some new things that you learned from the worksheet and/or activity?”

Processing

- Questions for discussion:
  - “How does stress change how you do your daily routine/life?” (roles, habituation, performance capacity)
  - “How does it feel when your stress affects or impacts the people around you?” (roles, environment)
  - “What are some coping strategies that work best for you?”

Generalizing

- Questions for discussion:
  - “What are 2 warning signs that are similar with group members?”
  - “What are 2 new coping skills that you plan to use when feeling stressed?”
  - “What is something new that you learned during today’s session?”
- Key principles of this session:
  - Participants will identify new coping skills to manage stress.
  - Participants will identify barriers that make it hard to follow a healthy routine.
  - Participants identify signs and feelings of bad stress.

Application

- The facilitator will go over the importance of healthy coping skills for stress management and barriers:
  - “The goal of this activity was to go over how stress changes you mentally and physically. We also talked about how to stop stress by using healthy coping skills that can be added into your daily routine. Stress can impact your health and risk of a TIA or a stroke. Using a healthy routine and
coping skills, when feeling stressed, can help lower modifiable risk factors.”

- Questions for discussion:
  - “What coping skills and strategies will you use when feeling anxious or stressed?”
    - “How will you motivate yourself to use these strategies and skills in your daily routine before then next session?”
  - “How can you use these skills and strategies in different environments, for example, if you are at work, school, out in the community, etc.?”
  - “How do you think knowing how to deal with stress will help you reach your goals?”

Summary

- Emphasize important points and ask if there are any questions and/or clarifications needed.
  - “Today we talked about what stress looks like and how it impacts the body, we went over good (positive) and bad (negative) stress, and how to use coping skills when feeling stressed.”
  - Review of Objectives:
    - “Participants will identify 2 coping skills to use when stressed.” (habituation)
    - “Participants will identify 2 barriers that make it hard to follow through and/or keep up with healthy routines.” (motivation)
    - “Participants will identify 2 warning signs for when they are becoming stressed.” (performance capacity)
  - Thank all the members for participating in the group session and validate their input.
  - **Homework** for next session: try one or two coping skills when you feel stressed, overwhelmed, or anxious before the next session.

Application of the MOHO

- Participants discussed negative and positive coping skills during the activity which focused on habituation of participants.

- Participants’ discussed barriers to wellness when feeling stressed during the processing section, this focused on performance capacity.
● In the application section volition was addressed through discussion of participants’ motivational factors to implement healthy coping strategies into their daily routine.

● Through discussion in the processing and application section, participants identified how stress impacts their social and cultural environments, along with how to implement new habits in different environments.
Session Four

Establishing Routines Continued
**Layout of group session:**

*Allow for 1 hour and 30 minutes for session, however all time may not be necessary*

- Review of last session: 2 minutes
- Go over group objectives: 2 minutes
- Introduce group session, go over expectations, check blood pressures: 15 minutes
- Warm-up: 5 minutes
- Activity: 45 minutes
- Sharing: 5 minutes
- Discussion: 10 minutes
- Summary/group wrap up: 5 minutes

**Supplies:**

- Groceries for the meals chosen by the therapist
- List of healthy, cost-effective foods and prices located in the STOP Program folder (Appendix B)
- Therapist can choose their own recipes or complete provided recipes below
- Kitchen with kitchen supplies
- Blood pressure cuffs
- Writing utensils
- Enough chairs for participants and tables
- Blood pressure chart in STOP Program folder (Appendix B)

Note to therapist: Keep in mind, meals should be cost-effective while being cognizant of what the participants will utilize in their home environments.

**Group membership:** This group (6-8 individuals) will take place in a kitchen, group members will split up into two different groups.

**Objectives:**

- *Participants will make a healthy, low cost meal. (performance capacity)*
- *Participants will identify 2 reasons why healthy meal planning can positively affect TIA risk factors. (habituation, volition)*
- *Patient will identify 2 negative eating habits they previously had and how they can make a positive change (habituation)*

**MOHO therapeutic strategies utilized throughout therapy session:**

- Validating, structuring, encouraging, identifying, advising, and negotiating

**Incentives for this session:** Healthy meal required foods, cost-effective healthy meal
Session structure:

Introduction

● “In the last session, we talked about what stress is and how this impacts the body. We also talked about using healthy coping skills when feeling stressed. Today we are going to talk about how stress can come with not having enough food, the amount of time spent making meals, financial planning for cost effective healthy meals and how planning ahead can help lower stress. By planning ahead with meals can lead to healthier eating habits.”

● The facilitator (OT) will introduce the topic of the group session, introduce self, and go over the objectives.
  ○ “During the group, each person should engage in the activity and respect one another. What is talked about during group is not allowed to be talked about after the group session ends (confidential).”

● Check blood pressures and record number values onto monthly blood pressure sheet located in STOP Program folder (Appendix B).

● Warm up: “What are some of the meals that you make at home?”

Activity

● For this activity, participants will be cooking a predetermined meal that is chosen by the therapist. These meals will be cost-effective healthy meals to promote a healthy lifestyle. Group members will break into 2 groups (3 to 4 members in each group) and cook one complete meal. One group will be making a salad and appetizer and the second group will be making the main dish.
  ○ Participants will have 30-40 minutes to complete the cooking activity within their group.
  ○ Ideas for cooking meals: (These are recommended cost-effective dishes, however therapist may have to adjust based on participant allergies)
    ■ Group 1: Make a salad and healthy appetizer
      ■ Salad
      ■ Head of romaine lettuce 99 cents
      ■ 8 ounces cheddar cheese $2.00
      ■ 1 tomato $1.07
      ■ 2 cups of baby carrots cut up $0.80
- Dressing (dependent upon dressing purchased)

- **Appetizer**
  - Boil a box of pasta, drain it, and add a can of diced tomatoes, a can of sliced black olives, a can of chickpeas, and some Italian dressing (or olive oil, balsamic vinegar, salt, and pepper).

- **Ingredients:**
  - 1 box penne pasta: $1.19
  - Can of diced tomatoes: 99 cents
  - Can of chickpeas: 99 cents
  - Sliced olives: 99 cents
  - 1/4 cup Italian dressing: 50 cents

- **Total:** $4.66 (makes six servings)
- **Price per serving:** 78 cents

- **Group 2: Main dish.**
  - Start by washing four sweet potatoes then cutting them up. Put them in a bowl, drizzle them with olive oil until they’re covered all over, then lay them flat on a baking sheet. Sprinkle the potatoes with your favorite seasoning then bake them at 400 degrees for 35 minutes. In the meantime, fire up the grill or oven and cook six chicken breasts until they’re no longer pink in the middle.

- **Ingredients:**
  - 6 chicken breasts: $8
  - 4 sweet potatoes: $2
  - Olive oil
  - Seasoning

- **Total:** $11 (makes six servings)
- **Price per serving:** $1.83

- Other food references provided on healthy and cost-effective foods handout in *STOP Program* folder (Appendix B).

- The facilitator will discuss meal preparation, the benefits to making meals in bulk, benefits of freezing meals, and cost-effective meals.
  - Benefits of meal preparation: cost-efficient, saves time, decreases stress, helps with portion control, and lower sodium intake (risk factor associated with blood pressure and TIA).
Shop in bulk to buy larger quantities that can be frozen for extended period of time to promote healthy eating, financial management, and meal preparation.

Follow a list to avoid additional items at the grocery store, sort through your fridge to determine what you actually need (financial management)

- Avoid foods that are high in saturated and trans fats. Too much of this will lead to high cholesterol, which a modifiable risk factor.
- Poor nutrition of fatty, salty foods increases a risk of TIA and stroke.
  - Adding salt to food increases blood pressure.

(Mayo Clinic, 2019)

Sharing

- “Now we will talk about the activity and you will have time to share your thoughts on it.”
- Questions for discussion:
  - “What was your favorite food from the meal and why?”

Processing

- Questions for discussion:
  - “What stops you from eating healthy?”
    - Ex. lack of finances, time, space, fresh food, knowledge of cooking healthy
  - “How are you in charge of your time and/or money for healthy eating?” (habituation)
  - “What is something you could do each week to help with meal preparation?”
  - “What is something you feel would make it difficult to cook healthy meals each day/week?” (performance capacity)
  - “What in your home/environment makes it hard for you to make healthy meals?” (environment)

Generalizing

- Questions for discussion:
  - “What are 2 common difficulties the group talked about with healthy meal planning?”
● “What are 2 common benefits of healthy meal planning that group members talked about?”

Key principles of this session:
○ Participant will identify the benefits of healthy eating that promotes prevention of a TIA.
○ Participants will identify their negative eating habits.

Application

● The facilitator will go over the importance of healthy meal planning:
  ○ “For this activity we went over the benefits of healthy meal planning, those long-term positive effects, and how to create a healthy routine.”

● Questions for discussion:
  ○ “How will you make 2 positive changes in your daily diet of what you eat next week?”
  ○ “What tool(s) that we went over will you use for planning your meals next week?”

Summary

● Emphasize important points and ask if there are any questions and/or clarifications needed.
  ○ “Today we talked about the value of healthy meal planning. Planning your meals ahead of time should lower costs. We also cooked a healthy meal today that showed you all you can make a low-cost healthy meal. Lastly, we went over how to create positive changes in your daily diet and how planning meals saves time too.”
  ○ Review of Objectives:
    ■ “Participants will make a healthy, low cost meal.” (performance capacity)
    ■ “Participants will identify 2 reasons why healthy meal planning can positively affect TIA risk factors.” (habituation, volition)
    ■ “Patient will identify 2 negative eating habits they previous had and how they can make a positive change.” (habituation)
  ○ Thank all the members for participating in the group session and validate their input. Provide the opportunity for participants to be referred to nutritionist if they demonstrate or express concerns about their eating habits.
Application to MOHO

- Through discussion during the activity, participants identified how to establish healthy meal preparation that addressed *routines* and *habits*.

- Participants identified *environmental* factors and other factors that affect their *performance capacity* in healthy meal preparation during the processing section.

- *Volition* was addressed during the application session by finding positive changes to make in their daily diet.
Session Five

Community and Social Supports
**Layout of group session:**

*Allow for 1 hour and 30 minutes for session, however all time may not be necessary*

- Review of last session: 2 minutes
- Go over group objectives: 2 minutes
- Introduce group session, go over expectations, check blood pressures: 15 minutes
- Warm-up: 5 minutes
- Activity: 45 minutes
- Sharing: 5 minutes
- Discussion: 10 minutes
- Summary/group wrap up: 5 minutes

**Supplies:**

- Community resource handout in *STOP Program* folder (Appendix B)
- Blood pressure cuffs
- Writing utensils
- Enough chairs for participants and tables
- BINGO sheets and blood pressure chart in *STOP Program* folder (Appendix B)
- Healthy snack
- BINGO game prizes

**Group membership:** This group (6-8 individuals) will take place in a quiet, small room that is set up in a circle format to facilitate discussion for participants above 55.

**Objectives:**

- *Participants will identify 2 community resources that they feel they could implement into their weekly and/or monthly routine.* (habituation)
- *Participants will identify one location that they would be willing to go, to check their blood pressure.* (habituation, environment, performance capacity)
- *Participants will identify 2 social supports they can use while establishing a healthy routine.* (environments, habituation)

**MOHO therapeutic strategies utilized throughout therapy session:**

- Negotiating, encouraging, coaching, advising, identifying, structuring

**Incentives for this session:** Healthy snack, BINGO game prizes (recommended $5 gift card to local grocery store, calendar, journal)
Session structure:

**Introduction**

- “In the last session we talked about healthy meal preparation. This lowers the time spent each day making meals and you can save money by doing it. Together we named some bad (negative) and good (positive) eating habits. Today we are going to talk about community and social supports that you can use through your recovery process.”

- The facilitator (OT) will introduce the topic of the group session, introduce self, and go over the objectives.
  - “During the group, each person should engage in the activity and respect one another. What is talked about during group is not allowed to be talked about after the group session ends (confidential).”

- Check blood pressures and record number values onto log sheet.

- Warm up question: “What are the community resources or materials that you currently use or have used before?”

**Activity**

- Directions: For the activity on community and social supports, the therapist will facilitate a BINGO game based on these concepts for participants. Participants will work together with a partner and share a BINGO card located in STOP Program folder (Appendix B). The therapist will draw one of the BINGO squares and read the statement, then participants will answer the question or statement while using their “Community and Social Supports” handout, located in the STOP Program folder (Appendix B), to answer the questions. Small treats and prizes will be provided for those who get a BINGO. Spend 20 to 30 minutes completing this activity.

- “Having people you can go to (social supports) during stressful times has many positives effects. When you have someone in your life to turn to, this may help with your ability to cope with stress. It can improve how you feel about yourself (self-esteem), lower blood pressure, improve healthy lifestyle behaviors, and motivate you to follow a treatment plan or goals. These are all things that we
have talked about in previous sessions. Social supports (friends/peers) also help improve or maintain your mental and physical health.”

- Provide examples of what good vs. bad social support is:
  - Good: Individuals who support you and your goals, work together with you on your goals (for example: having a healthy lifestyle). The people who support you should not add stress to your life.
  - Bad: People who do not support you or pressure you to make negative life decisions (drink, drug usage, binge eat, over eat, not exercise, etc.)
- Ways to improve social support:
  - Volunteer, gym membership, take a class, participate in this program and get to know your peers, etc.

(Mayo Clinic, 2018)

**Sharing**

- “Now we will talk about the activity and you will have time to share your thoughts on it.”
- Questions for discussion:
  - “What is a new resource that you learned about today?”

**Processing**

- Questions for discussion:
  - “How do you feel about using the people around you as social supports?” (personal causation-volition)
  - “How do you feel about using the community resources talked about today?” (Performance capacity, volition, environment)
  - “What are some resources you think you will use, that were talked about today?” (volition)

**Generalizing**

- Questions for discussion:
  - “What are 2 common social supports that were talked about in this group?”
  - “What is 1 community resource that was not talked about today?”
- Key principles of this session:
  - Participants will choose social supports, and the positives that they will have on health.
○ Participants will choose community supports and how this can help improve their health and prevent stress.

**Application**

- The facilitator will go over the importance of having social supports and knowing community resources participants can use:
  - “Having social supports impacts your health both physically and mentally. This activity gave you resources to use and ideas on how to create a healthy lifestyle. This also helps you to be aware of the resources already around you, that you can use. We also talked about people who you can go to when feeling stressed.”

- Questions for discussion:
  - “What is 1 free app that you will download and try?”
  - “What are some resources that you will use next week in the community?”
    - “Where will you go to check your blood pressure next week?”
  - “How will these resources help you meet your goals that you have set in this group?”
  - “Who is one person that you will reach out to for support to this week?”

**Summary**

- Emphasize important points and ask if there are any questions and/or clarifications needed.
  - “Today we talked about many resources within the Grand Forks community that you can use to help create a healthy routine. They include resources for physical exercise, medication management, self-care, taking care of your stress and more. We also talked about taking care of your overall health and why you should have people in your life that support you.”

- Review of Objectives:
  - “Participants will identify 2 community resources they feel they could implement into their weekly and/or monthly routine.” (habituation)
  - “Participants will identify one location that they would be willing to go check their blood pressure.” (habituation, environment, performance capacity)
“Participants will identify 2 social supports that they can use while establishing a healthy routine.” (environments, habituation)

- Thank all the members for participating in the group session and validate their input.
- **Homework** for next session:
  - **Participants**: bring gym clothes for session 6 activity.
  - **Therapist**: The therapist will request an athletic trainer at the gym (YMCA) and have them provide handouts of exercises for the participants to participate in.

**Application to MOHO**

- Participants reflected and discussed social supports within their *environment* that will enhance their *performance capacity* during the processing section.

- *Volition* was addressed through discussion of community resources they plan to utilize in the application section.

- Participants identified the benefits of social supports that addressed *performance capacity* and *roles* through participation in the activity.
Session Six

Wrap-up to promoting wellness
**Layout of group session:**

*Allow for 1 hour and 30 minutes for session, however all time may not be necessary*

- Review of last session: 2 minutes
- Go over group objectives: 2 minutes
- Introduce group session, go over expectations, check blood pressures: 10 minutes
- Warm-up: 5 minutes
- Activity: 40 minutes
- Sharing: 5 minutes
- Discussion: 10 minutes
- Summary/group wrap up, administer post-test: 15 minutes

**Supplies:**
- Blood pressure cuffs
- Writing utensils
- Enough chairs for participants and table
- Blood pressure charts located in *STOP Program* folder (Appendix B)
- Exercise tracker handout, located in *STOP Program* folder (Appendix B), provided to establish a healthy routine, target heart rate, what is a high/low range and what to do if that occurs.

**Group membership:** This group (6-8 individuals) will take place at the local gym (will meet at the outpatient facility and go together to the YMCA).

**Objectives:**

- *Participants will identify 2 potential times that work for them, within a week, to workout at the fitness center to establish a healthy routine.* (habituation)
- *Participants will report 2 reasons why it is beneficial to elevate heart rate for 30 minutes a day and association to their risk factors of a TIA.*

**MOHO therapeutic strategies utilized throughout therapy session:**

- Coaching, validating, encouraging, advising, identifying, structuring, and negotiating

**Incentives for this session:** Healthy snacks, gym membership, guided workout session with trainer
Session structure:

Introduction

- “In the last session, we talked about many community resources you can use in Grand Forks and the why having people who support you is good for your health. Today we are going to go over why you should raise your heart rate often and end with a course wrap-up.”

- The facilitator (OT) will introduce the topic of the group session, introduce self, and go over the objectives.
  - “During the group, each person should engage in the activity and respect one another. What is talked about during group is not allowed to be talked about after the group session ends (confidential).”

- Check blood pressures and record number values onto log sheet located in STOP Program folder (Appendix B).

- Warm up: “What type of activities do you enjoy doing at home or out in the community that raise your heart rate?”

Activity

- The activity will consist of going over safe techniques of working out, stretches, with a trainer leading a sample workout session

- Education to provide in relation to TIA
  - “It is important to stay physically active after a TIA to stop another TIA or stroke from happening. The American Stroke Association (2017) says that spending 30 minutes a day for five days a week can lower your risk of having a stroke by over 25%. Not only does exercise have benefits for your physical health, but also your mental health. “
    - Exercise can help lower blood pressure and cholesterol levels, lower your risk of getting diabetes or having heart disease, and lower weight. This can also lower anxiety and depression, increase your energy levels, increase how you feel about yourself (self-esteem), and help you sleep better at night. Most of these are the
Examples of different forms of exercise:

- Walking the dog, gardening, working on the lawn, taking stairs instead of the elevator, swimming, jogging, cycling, dancing, yoga, Pilates, playing games with family (tag, basketball, softball, baseball, volleyball, etc.), all forms of participating in exercise alone or with family and friends. (ASA, 2017)

- Timing: 30-45 minutes of education provided and having the trainer go over examples of exercises and having participants practice the moves being discussed.

**Sharing**

- “Now we will talk about the activity and you will have time to share your thoughts on it.”
- Questions for discussion:
  - “What did you enjoy about this activity?” (volition)

**Processing**

- Questions for discussion:
  - “How did you feel while working out?” (volition)
  - “What activities might you do to raise your heart rate?” (performance capacity)
  - “What did you like about working out at a gym and with your group members?” (environment)
  - “What was something that was difficult for you during this activity?” (volition, performance capacity)
  - “What is a positive about exercising that relates to your TIA?”

**Generalizing**

- Questions for discussion:
  - “What are some benefits of exercises?”
  - “What were some difficulties to working out?”
- Key principles of this session:
  - Participants talked about the benefits of exercise for living a healthy lifestyle.
Participants gave ideas on how to stay active, how to get their heart rate up and how to go to the gym when they do not want to.

Application

- The facilitator will go over the importance of raising their heart rate and how it relates to their TIA:
  - “Today we talked about why keeping your body moving (physical exercise) is important and how it can help lower the modifiable risk factors that we have talked about so far in our sessions.”

- Questions for discussion:
  - “What kinds of activities do you do that give you a workout” (volition)
  - “How could you start a workout routine around those activities?” (habituation)
  - “What physical activities will you try and where will you do them?” (environment)

Summary

- Emphasize important points and ask if there are any questions and/or clarifications needed.
  - “Today we talked about the value of raising our heart rate, through physical activity. We’ve enjoyed our time together and getting to know each of you. We hope you have found this course helpful with all the handouts given to you in your folder and through all of the real-life examples provided. Now you can use these to create a healthy lifestyle.”

- Review of Objectives:
  - “Participants will tell the group 2 times within a week that they will go to work out at the fitness center to establish a healthy routine.”
  - “Participants will report 2 reasons why they should raise their heart rate for 30 minutes a day and how that affects their modifiable risk factors.”

- Course wrap up-go over what was discussed throughout the course of the last few weeks and the materials.
  - Wrap up: “Making changes in your lifestyle to control the modifiable risk factors of stroke and TIA (occupational
adaptation). What makes it possible to take control of a healthy lifestyle includes what you enjoy, your values, interests, to change your routine. This program has helped you with forming a new identity (occupational identity) with a healthy lifestyle. A follow-up session will be available to help you understand (occupational competence) what we have talked about during this program to maintain your healthy lifestyle. During this session, we can discuss anything you would like. This may be wanting more supports in the community, taking through how to motivate yourself, or how to make good changes for your health. You may experience a change in your daily habits, routines, or the ability to perform, manage and understand risk factors for another TIA.”

- Set up an at home follow-up session for each individual participant for a month after session 6.
- Administer the post-test and spend 6 to 10 minutes completing.
- Thank all the members for participating in group and validate their input.

Application to MOHO

- During the processing section, participants determined how to continue to establish a healthy physical activity routine, addressing habituation.

- Participants addressed performance capacity during the activity through engagement in a short workout with a trainer within a gym environment.

- During the processing section, participants discussed their feeling about working out, as well as what they liked and disliked, addressing their volition to be active again in the future.
STOP Program Post-test
Secondary TIA Outpatient Prevention Program

Administration instructions:
- Step 1: State the instructions to ensure participants understand it is important for them to ask questions if there are any.
  - Instruction: “Now that you all have completed the STOP Program, I am going to have each of you work on completing this short handout that you also saw the first day of the program. This looks at your understanding of your “mini stroke” also known as a transient ischemic attack and how this relates to your everyday life now that you have been working at modifying it. I will be reading these question out loud and ask for you all to ask questions if there is anything you do not understand. I know sometimes question about a topic that is unfamiliar can be more difficult, therefore you all should feel it is alright to ask questions.”

- Step 2: Hand out worksheet (do not hand out worksheet until initial instructions are provided)
- Step 3: Read questions out loud and answer questions as if participants ask.
**Transient ischemic attack education:**

1. On a scale of “not at all” to “very much”, how well do you understand what a transient ischemic attack is? (environment)

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<th>Not at all (1)</th>
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2. On a scale of “not at all” to “very much”, how well do you understand the chance of having a stroke after a transient ischemic attack?

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**Self-Management:**

3. On a scale of “not at all” to “very much”, how well are you watching your health needs? (performance Capacity)

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4. On a scale of “not at all” to “very much”, how often is it hard to follow your daily routine? (habituation, performance capacity)

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**Healthy Routine:**

5. On a scale of “not at all” to “very much”, how well are you in charge of your stress levels? (performance capacity)

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6. On a scale of “not at all” to “very much”, how likely are you to follow a healthy routine? (Volition; habitation)

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**Social and Community Supports:**

7. On a scale of “not at all” to “very much”, how important do you think it is to reach out to people who support you? (volition)

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8. On a scale of “not at all” to “very much” how comfortable are you reaching out to others for support? (performance capacity)

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**Wellness:**

9. On a scale of “not at all (0 days)” to “very much (5-7 days)” How often are you active during the week? (habituation)

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10. On a scale of “not at all” to “very much”, how important do you think it is to do physical activity after a transient ischemic attack? (volition)

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**Other:**

11. How do you feel this education course helped you to understand how you can help prevent a stroke from happening?

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12. On a scale of “not at all” to “very much”, how likely are you to use the information that was given during this course in your everyday life?

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Session Seven

At home follow-up
**Layout of session:**

The facilitating therapist will be completing an at home follow-up session with each participant. This session is at the participant's home and will be set up at the end of session six. There will be 45 minutes allowed for each home visit, however this full amount of time may not be necessary. The purpose for this at home follow-up session is for the therapist to check-in with participants. Together, they will determine how the participant is doing with establishing a healthy routine within their home environment. This session will specifically target areas that were discussed in the *STOP Program* related to the participants transient ischemic attack (TIA). The therapist will facilitate a discussion with participants on environmental barriers and personal factors that impact their ability to improve or maintain a healthy lifestyle routine. In addition, a discussion of what has worked or helped them to achieve their goals and ability to establish a healthy routine. This may be what was discussed and used throughout the *STOP Program*. The overall outcome for this program was guided by the Model of Human Occupation. The *STOP Program* goal was for individuals to create their occupational identity and maintain their occupational competence, overall improving occupational adaptation.

**What to discuss/look for during this session:**

- Therapist will thank the participant for allowing them to come visit at their home and provide the purpose of the home follow-up.
  - “The purpose of this session is to check in on you, to see how following your healthy routine and achieving goals has been going. As well as, determining if the STOP Program education helped you. We will also talk about any concerns and/or problems that you may be experiencing. Then we can work together to figure out strategies to help you follow the healthy routine you want.”
- Make environmental modifications as necessary to promote engagement.
- Utilize and follow the at home follow-up checklist.
  - Example questions to ask participants based off of the at home follow-up checklist:
    - “What are some things within your home that have helped you to follow a healthy routine?” (environment)
    - “What are some things that have been difficult to follow or maintain a healthy routine?” (habituation)
    - “Are there any concerns that you have while I’m here and want to discuss?” (volition, habituation, performance capacity)
    - “Have you used any of the strategies that we talked about during our sessions out in the community, work, or with friends?” (environment)
“Have you created any new goals for yourself to create a healthy routine?” (volition)

- Wrap up:
  - Thank the participant for letting you come into their home and validate their input or what was discussed during the session. Ask the participant if there are any comments or questions that they still have. Provide additional information or referrals as necessary.
### Session 7: At home follow-up checklist

| Greetings and Introduction | □ Greet the participant and thank them for meeting with you  
|                           | □ Review the purpose of the at home follow-up  
|                           | □ Ask how goals are going and discuss ones that have not been met  
|                           | □ Ask if any new modifiable risk factors have been determined | Comments: |
| Medication Management | □ Ask participants how following a medication routine/taking prescribed medication is going, if there are any barriers/difficulties  
|                           | □ Reinforce/validate the participant on what they are currently doing and provide encouragement  
|                           | □ Discuss alternative strategies to help address difficulties | |
| Self-management strategies | □ Ask how the self-management strategies discussed in the program are going; what is working well, what has been challenging  
|                           | □ Discuss strategies and ways to incorporate them into a daily routine  
|                           | □ Provide demonstrations if necessary, or examples | |
| Establishing a healthy routine: Meal preparation and stress management | □ Ask how using the handouts provided in the program has been going, discuss any barriers, what has worked well, challenges to establishing a healthy routine  
|                           | □ Address any environmental factors that impact their ability to complete the routine  
|                           | □ Discuss strategies to incorporate to succeed | |
| Community resources and social supports | □ Ask if there have been community resources they have used or plan to use  
|                           | □ Discuss any barriers to use the resources/reaching out to social supports  
|                           | □ Provide strategies to use supports and resources | |
| **Physical Wellness** | □ Ask if they have gone to the gym/as a workout, plan to, what they have done at the gym/as a workout that they liked/dislike
□ Discuss any barriers that have impacted their performance to participate in physical activities
□ Provide strategies to improve their participation |

| **Referrals/Summary** | □ Provide additional information/referrals as necessary
□ Ask if there are any additional questions/comments
□ Thank the participant for their time, participation, and letting you into their home. |

**Other important comments:**

________________________________________________________________________

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Product II

Neurologist In-Service to promote
STOP Program Referrals
**Instructions**

The Neurologist in-service is for the *STOP Program* facilitating therapists to use to promote and create awareness about the new program that they are implementing. Therapists should review the entire *STOP Program* manual prior to providing this in-service. Therapists are allowed to make adjustments and add to the PowerPoint as they see fit. This is to be used as a guide.

Along with the in-service PowerPoint, there is a handout for facilitating therapists to provide to those who attend the session. This handout has key concepts of the in-service that are important for attendees to remember when referring individuals who experienced a TIA and are of lower socioeconomic status to the *STOP Program*.

*see next page for beginning of PowerPoint*
Occupational Therapist’s Role in Secondary Prevention: Addressing TIA and Lower SES

Presented by: (Insert facilitating therapists name)

The Problem:

- There is a lack of secondary prevention programs that address TIA and that are being implemented throughout the United States.

- The purpose of the Secondary TIA Outpatient Prevention (STOP) Program is to provide secondary prevention in an outpatient setting to individuals who have:
  - Experienced a transient ischemic attack
  - Are of a lower socioeconomic status
  - 55 and older

- Inclusion criteria listed here will be further discussed during the presentation
Supportive Research: (HEALS) Healthy Eating and Lifestyle After Stroke

- Secondary prevention programs that have been proven to be effective for individuals who experienced a TIA or stroke:
  - The HEALS program addressed modifiable risk factors
    - de  40 years or older, and experienced a TIA or ischemic stroke
    - Interventions focused on: healthy lifestyles, meaningful lifestyles, education, awareness, and goal setting
    - Program had effective, feasible and cost effective outcomes

(Hill et al., 2017)

Supportive Research: (INSPIRE-TMS) Intensified Secondary Prevention intending a Reeducation of Recurrent Events in TIA and Minor Stroke Patients

- INSPIRE-TMS is a current secondary prevention program
  - Participants experienced a TIA or a minor stroke
  - Interventions: risk factor control, medication control, individual’s plan, and compliance of oral anticoagulation therapy
  - Results are to be completed by the end of the year 2019

(Leistner et al., 2013)
Supportive Research Continued

- Research supports the implementation of identifying/addressing modifiable risk factors through education and interventions
  - Lifestyle modifications: physical inactivity, obesity, smoking, drug abuse, nutrition/diet, alcohol consumption, blood pressure, & diabetes mellitus

(American Heart Association [AHA], 2019; Holzemer et al., 2011; Khare, 2016; Zhang, Cadilhac, Donnan, Callaghan, & Dewey, 2009)

- Therapist will explain what lifestyle modifications means.

Supportive Research Continued

- Low to middle income countries may experience more challenges for the implementation of life long treatment due to chronic conditions.
- This is due to the health literacy and self-efficacy of these individuals typically being lower.

(Yan et al., 2016)
Occupational Therapy’s (OT’s) Role

- For individuals who experience a TIA, OT’s scope of practice includes:
  - Education on hypertension, diabetes, obesity and smoking, physical activity, meal preparation, self-management skills (medication management), social/community supports, and emotional wellness through leisure participation (American Occupational Therapy Association [AOTA], 2014)
- Long-term monitoring is necessary for follow through of healthy lifestyle modifications (Holzemer et al., 2011)

OT’s Role continued

1. Develop a daily routine and healthy habits
2. Self-management strategies used to empower the individual to manage/control their own lifestyle
3. Lifestyle modifications
4. Identifying environmental factors that hinder performance

*The goal is to create effective outcomes, reduction in health care costs, & better quality of life.*
Why is this in-service for you?

1. Deciding factor of where these individuals will go after they are diagnosed with a TIA
2. Prevent them from falling through the crack
3. Prevention of a recurrent stroke from occurring
4. Referral for outpatient therapy to the STOP Program

Model of Human Occupation (MOHO)

(Clifford O’Brien, 2017)

Major Concepts of MOHO

<table>
<thead>
<tr>
<th>Volition</th>
<th>Habituation</th>
<th>Performance Capacities</th>
<th>Environment</th>
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<tr>
<td>Refers to the motivation of an individual toward and what they choose to do.</td>
<td>Patterns and routines an individual engages in efficiently and automatically.</td>
<td>How an individual's performance is affected based on bodily systems, such as: musculoskeletal, neurological, etc.</td>
<td>Different contexts influence how the volition, habituation and performance capacity are affected.</td>
</tr>
</tbody>
</table>
Secondary TIA Outpatient Prevention (STOP) Program: Addressing Individuals of lower SES

Overarching goals:

a. To establish healthy routines through engagement in occupations
b. Patients will understand what a TIA/stroke is and preventative strategies through a teach back method to ensure understanding
c. Reduce hospital readmission rates, healthcare costs, and prevent a secondary TIA or larger stroke from occurring

STOP Program Sessions

- A teach back method is implemented to ensure participant understanding of each session
- Sessions are tailored and modified to a literacy level of sixth grade or below
- Participant handouts are tailored and modified to a literacy level of fourth grade or below
STOP Program Session Outline

Seven sessions (1 hr 30 mins in length for each/45 mins for seventh):

- **Session One:** Education provided on TIA/stroke, signs, symptoms & identifying modifiable risk factors
- **Session Two:** Self-management through a medication management activity
  - Pharmacist present to discuss common medications
- **Session Three:** Establishing healthy routines through stress-management

Session Outline Continued

- **Session Four:** Establishing healthy routines by focusing on financial planning, stress reduction and meal preparation
- **Session Five:** Community and social supports
- **Session Six:** Wrap up to promoting wellness through physical activity
  - Athletic trainer provides exercises group during session
- **Session Seven:** At home follow-up
STOP Program Pre-test and Post-test

The pre-test and post-test are tailored to the STOP Program and will be administered to evaluate the outcomes and effectiveness of the program.

- Guided by core concepts of the Model of Human Occupation
- Address concepts focused on during STOP Program sessions
- Literacy level of fifth grade, however tests will be read aloud to ensure understanding

Target Population for Referrals (Inclusion Criteria)

1. Individuals who have been diagnosed with a TIA
2. Lower SES: who are on medicaid, medicare, at or below poverty level, and/or have no insurance
3. Males/females above the age of 55 years old
4. Have one or more risk factors associated with a TIA/stroke:
   a. High blood pressure, high cholesterol, tobacco smoker, family history of stroke/TIA, obesity, and/or diabetes mellitus

(Khare, 2016; Mayo Clinic, 2019)
Resources about OT in an Outpatient Setting

- Health and wellbeing:
  - https://www.aota.org/~/media/Corporate/Files/AboutOT/Professionals/WhatIsOT/HW/Facts/FactSheet_HealthPromotion.pdf
- Chronic disease management:
  - https://www.aota.org/~/media/Corporate/Files/AboutOT/Professionals/WhatIsOT/HW/Facts/FactSheet_ChronicDiseaseManagement.pdf

Questions?

Thank you for your time and consideration!
References

https://www.heart.org/en/health-topics/high-blood-pressure

*American Journal of Occupational Therapy*, 68 (Suppl. 1) S1-S48.

Clifford O’Brien, J. (2017). Model of human occupation In J. Hinojosa, P. Kramer, & C. Brasic Royeen (Eds.), *Perspectives on

References Continued

intervention for stroke survivors: Design of healthy eating and lifestyle after stroke (HEALS). *Journal of Stroke and

impact of intensive education. *The Journal for

doi:10.4103/0976-7800.179166


The STOP Program Inservice

The Problem
Lack of secondary prevention provided for individuals who experience a Transient Ischemic Attack (TIA) and of lower socioeconomic status.

Outcome Goals
The outcome of the STOP program is to increase wellness and decrease hospitalizations and/or incidence of stroke.

Why STOP program and Occupational Therapists?
• Goals of STOP Program
  o To establish healthy routines through engagement in occupations
  o Participants will understand what a TIA and stroke are and preventative strategies
• Stop program sessions
  o Education on TIA and stroke prevention
  o Self-management and medication management
  o Establishing a healthy routine through meal preparation and stress management
  o Community and Social Supports
  o Physical Education and Exercise
  o At home follow-up

Why Neurologists?
Neurologists decide where patients go after the hospital and can refer to the STOP Program

Supporting Research
INSPIRE-TMS: An intensified secondary TIA/stroke prevention program
• focused on improvement in risk factor control and adherence to medical recommendations while being cost-effective.
• the most important modifiable risk factor they focused on was blood pressure. (Leistner et al., 2013).

HEALS:
• focused on healthy and meaningful lifestyle practices through education, awareness, and goal setting (Hill et al., 2017).

Thrift Food Plan
• relaxed nutrition constraints and maximized SNAP for individuals who were on a budget to provide them with the most nutritious diet based on income (Drewnowski & Eichelsdoerfer, 2010).

Inclusion Criteria for Participants:
• Diagnosed with a Transient Ischemic Attack
• Male or Female
• 55 year of age or older
• Lower Socioeconomic status: on Medicaid, Medicare or are at or below poverty level
• Have one or more risk factors associated with TIA/Stroke:
  o High blood pressure, high cholesterol, tobacco smoker, family history, obesity, and diabetes mellitus (Mayo Clinic, 2019; Khare, 2016)
CHAPTER V

SUMMARY

The purpose of this scholarly project was to develop a secondary prevention program implemented by occupational therapists for individuals who have experienced a transient ischemic attack (TIA), are of lower socioeconomic status (SES), and who are age 55 plus. Additionally, this project was created for occupational therapists to provide education to these at-risk individuals, on modifiable risk factors to reduce their likelihood of a recurrent TIA or a stroke. This product is intended to help individuals to create healthy routines through lifestyle modifications that address modifiable risk factors.

An extensive review of the literature was completed on secondary prevention of a TIA or stroke, occupational therapy, lower SES, and modifiable risk factors. This led to the development of the Secondary TIA Outpatient Prevention (STOP) Program that was guided by Cole’s Seven Steps and the Model of Human Occupation (MOHO). Cole’s Seven Steps provided a step-by-step protocol for facilitators to use to guide group intervention sessions (Cole, 2012). All product sessions consist of an introduction, activity, sharing, processing, generalizing, application, and summary (Cole, 2012). The MOHO principles guided the development of questions for the detailed outline of group protocols, the pre-test and post-test tailored to the STOP Program, and the sessions. The MOHO composed of four main components of the individual (Kielhofner, 2008). These
components include volition, habituation, performance capacity, and environment (Kielhofner, 2008). They are evident throughout each group session.

The *STOP Program* was intended to provide education for participants on what a TIA is, modifiable and non-modifiable risk factors, self-management (medication management activity), establishing healthy habits and addressing barriers (meal preparation and stress management), community resources and supports, warm-up to promoting wellness (physical wellbeing activity), and an at home follow-up session. All topics addressed were supported by the literature. All the group sessions are occupation-based and facilitate the “doing” to empower individuals to create and establish a healthy routine and lifestyle. Throughout the program, a teach-back method was implemented to ensure individuals understand the material and concepts being covered for effective results. In addition, the handouts for the participants and education provided was tailored to a literacy level at or below a sixth-grade level. With the exclusion of major concepts, which have sixth grade literacy level definitions provided along with them. The usefulness of this product will be determined by a pre-test and post-test assessment that will be provided to participants on the first and final day of the *STOP Program*. The pre-test and post-test were created based off of the topics that are being addressed throughout the program, as well as being guided by the four main concepts of MOHO. The usefulness will be assessed through a three-point Likert scale that ranges from “not at all” to “very much.”

Another component of this scholarly project was an in-service PowerPoint and handout for neurologists to obtain necessary referrals for the *STOP Program*. This product has included the presented problem, supported research based on the literature review, the occupational therapist's role throughout the program, information for the
referring neurologists, the basic components of the MOHO, an outline of the *STOP Program*, definition of the target population, and extra resources. The usefulness of this product will be based off the number of referrals made to the *STOP Program*.

For the implementation of this product, the facilitating therapists should first review the entire program to gain the full perspective of the program objectives, purpose, and implementation process. Then provide an in-service to local neurologists within the region to obtain necessary referrals for the *STOP Program*. After six to eight individuals are referred to the program, a pilot study could be implemented. As the therapist prepares for the implementation of the *STOP Program* they should review the manual, prepare *STOP Program* folders for participants, and gather other important materials. Strengths of this program included the cost-effective sessions, sessions tailored to an appropriate health literacy levels to meet individual needs, occupation-based activities, and an at home follow-up to ensure follow through with the program education and skills.

**Limitations**

The main limitation of the *STOP Program* is that it has not been tested or implemented for effectiveness. This product specifically targets individuals of lower SES, who have experienced a TIA, and are 55 plus. However, this could be modified to reach a larger population of all individuals who have experienced a TIA for all ages. Another limitation of this product was the limited amount of research on occupational therapy's role in secondary prevention of a TIA or stroke. Due to health literacy rates being low throughout the United States (U.S. Department of Health & Human Services, 2008), a health literacy tool could be utilized as an assessment to ensure materials and sessions are more inclusive; the handouts of the sessions are written in English.
Recommendations

Recommendations for the implementation of the product and future research. The first recommendation is to implement the STOP Program to determine the effectiveness and usability of a set of detailed group sessions. In addition, the STOP Program could be incorporated into an interdisciplinary team approach. The second recommendation is to increase the research on occupational therapy’s role in this area by disseminating results from the implementation of the STOP Program. There is currently a lack of research with occupational therapy's role in such programs. The final recommendation is to explore the implementation of the STOP Program into a primary care setting with occupational therapy’s role. Further exploration of the incorporation of an interdisciplinary team within the STOP Program may provide promising results.

Conclusion

Overall, the STOP Program has an effective approach to teach multiple skills to promote a healthy lifestyle for individuals who experienced a transient ischemic attack by an occupational therapist. This program will allow occupational therapists to provide evidence-based, client-centered, and occupation-based interventions to each of the participants. Following implementation of the STOP Program it is anticipated that the participants who experience a TIA will demonstrate the ability to adjust modifiable risk factors related to their diagnosis effectively and efficiently, create and maintain a healthy lifestyle.
APPENDIX A

MOHO APPLICATION TO THE STOP Program
APPENDIX B

STOP Program FOLDER
Secondary TIA Outpatient Prevention (STOP) Program

Participant Handouts
### Table of Contents

*Insert page numbers prior to printing*

- Session 1
- Session 2
- Session 3
- Session 4
- Session 5
- Session 6
- Pre-Test
- Post-Test
Session One

Introduction and education for the *STOP Program* Handouts
Blood flow to the brain stops for about 5 minutes to less than 24 hours and has symptoms similar to a stroke.

**How do I know when I am having a TIA or Stroke (symptoms)?**
- Difficult to understand (slurred speech)
- Loss of balance or coordination
- Difficulty seeing (blindness) in eye(s)
- Seeing two (double vision)
- Sudden headache
- Feels weak, numbness/tingling
- Unable to move side of the body (arm, leg or both)

**(Mayo Clinic, 2019)**

**Warning Signs of a Stroke (FAST)**

<table>
<thead>
<tr>
<th>F</th>
<th>Face: When a person’s mouth falls (droops) on one side</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Arms: Ask the person to lift up their arms, does one fall down faster than the other?</td>
</tr>
<tr>
<td>S</td>
<td>Speech: Ask the person to say, “The sky is grey” and listen for slurred speech</td>
</tr>
<tr>
<td>T</td>
<td>Time: Call 9-1-1</td>
</tr>
</tbody>
</table>

**Risk factors of a TIA?**
- Blood Pressure
- High Cholesterol
- Male
- Over 55 years of age
- Prior TIA

**(Mayo Clinic, 2019)**

**Blood Pressure**
High blood pressure: The forces of the blood pushing against the walls of your blood vessels is too high.

**Target blood pressure:**
Less than 120/80

**(American Heart Association, 2019)**

**Transient Ischemic Attack (TIA) Fact Sheet**

a “mini stroke” or “warning sign stroke”
Month: ____________

<table>
<thead>
<tr>
<th>Sunday</th>
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<td>Example BP: 120/80</td>
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<td>Date:</td>
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<td>Example BP: 120/80</td>
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<td>Example</td>
<td>BP:120/80</td>
<td>Date: 1/1/19</td>
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</tr>
</tbody>
</table>

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STOP PROGRAM GOAL SHEET:

What risk factor(s) can you work on:
1. ______________________________
2. ______________________________

Goal 1:
______________________________________
______________________________________
______________________________________

Goal 2:
______________________________________
______________________________________
______________________________________

Goal 3:
______________________________________
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Session Two

Self-Management Handouts
Self-Management Skills Fact Sheet

Self-Management Skills:

- Problem solving and choose your modifiable risk factors for a TIA
- Keep a healthy lifestyle which includes: create an exercise routine, healthy eating habits, bedtime routine, and choose skills to manage your stress
- Manage symptoms and modifiable risk factors of a TIA
- Make decisions about when to seek medical help: Act FAST
- Be willing to try ideas or advice from your healthcare providers
- Taking medications on time for safety and following a routine
- Finding and using community resources
- Changing social activities as you need, come to the STOP program groups and ask questions; do not do recovery and prevention of TIA alone

Action Plan:
- What is the problem
- Make a goal
  - What are you going to do?
    - Walk
  - How much will you do?
    - One mile
  - When will you do this?
    - After I eat breakfast
  - How often will you to this?
    - Three times a week

Make your own action

Problem:______________
Goal:______________
What?______________
How much?______________
When?______________
How?______________

(Lorig et al., 2012)
## Medication Planner

### Morning Medication
1. ____________________________  # of Pills:____
2. ____________________________  # of Pills:____
3. ____________________________  # of Pills:____
4. ____________________________  # of Pills:____
5. ____________________________  # of Pills:____

### Noon Medication
1. ____________________________  # of Pills:____
2. ____________________________  # of Pills:____
3. ____________________________  # of Pills:____
4. ____________________________  # of Pills:____
5. ____________________________  # of Pills:____

### Afternoon Medication
1. ____________________________  # of Pills:____
2. ____________________________  # of Pills:____
3. ____________________________  # of Pills:____
4. ____________________________  # of Pills:____
5. ____________________________  # of Pills:____

### Evening Medication
1. ____________________________  # of Pills:____
2. ____________________________  # of Pills:____
3. ____________________________  # of Pills:____
4. ____________________________  # of Pills:____
5. ____________________________  # of Pills:____

### Other Medication
________________________________  # of Pills:____
________________________________  # of Pills:____
________________________________  # of Pills:____
Session Three

Establishing healthy routines and addressing barriers
STOP stress: Know your warning signs

**Triggers**
What is something that causes you stress often?

1) ______________________________
2) ______________________________
3) ______________________________

**Warning Signs**
What do you feel when you are starting to get stressed?

1) ______________________________
2) ______________________________
3) ______________________________

**Barriers**
What keeps you stressed?

1) ______________________________
2) ______________________________
3) ______________________________

**Coping Skills**
What skills can you use to make you feel less stressed or to stop stress when it is beginning?

1) ______________________________
2) ______________________________
3) ______________________________
Session Four

Establishing Routines
Continued
Handouts
## Healthy and cost-effective food options

<table>
<thead>
<tr>
<th>Food</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protein</strong></td>
<td></td>
</tr>
<tr>
<td>6 Chicken breasts</td>
<td>$8.00</td>
</tr>
<tr>
<td>6-oz. Canned Salmon</td>
<td>$3.60</td>
</tr>
<tr>
<td>½ lb. cooked ham</td>
<td>$2.99</td>
</tr>
<tr>
<td>92 grams Sardines</td>
<td>$2.00</td>
</tr>
<tr>
<td>30-oz. can of chicken/vegetable stock</td>
<td>$1.99</td>
</tr>
<tr>
<td>Carton of eggs</td>
<td>$1.99</td>
</tr>
<tr>
<td>Peanut butter</td>
<td>$1.99</td>
</tr>
<tr>
<td>Can of black beans</td>
<td>$0.99</td>
</tr>
<tr>
<td>3-ounce tuna</td>
<td>$0.99</td>
</tr>
<tr>
<td><strong>Vegetables</strong></td>
<td></td>
</tr>
<tr>
<td>Canned or Frozen Vegetables</td>
<td>$1.19</td>
</tr>
<tr>
<td>Head of lettuce/romaine</td>
<td>$0.99</td>
</tr>
<tr>
<td>Cauliflower heads per cup</td>
<td>$0.44</td>
</tr>
<tr>
<td>Cup of carrots</td>
<td>$0.40</td>
</tr>
<tr>
<td>Red kidney beans per cup</td>
<td>$0.27</td>
</tr>
<tr>
<td>Fresh green cabbage per cup</td>
<td>$0.26</td>
</tr>
<tr>
<td><strong>Fruit</strong></td>
<td></td>
</tr>
<tr>
<td>Large can of tomato's</td>
<td>$1.49</td>
</tr>
<tr>
<td>Dried Apricots</td>
<td>$1.05</td>
</tr>
<tr>
<td>Canned pears</td>
<td>$0.97</td>
</tr>
<tr>
<td>Canned pineapple in juice</td>
<td>$0.69</td>
</tr>
<tr>
<td>1 Apple</td>
<td>$0.44</td>
</tr>
<tr>
<td>1 Banana</td>
<td>$0.25</td>
</tr>
<tr>
<td><strong>Carbohydrates</strong></td>
<td></td>
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<tr>
<td>6 potatoes</td>
<td>$2.00</td>
</tr>
<tr>
<td>Loaf of bread</td>
<td>$1.99</td>
</tr>
<tr>
<td>8 pack of tortillas</td>
<td>$1.89</td>
</tr>
<tr>
<td>1 pound Rolled Oats</td>
<td>$1.30</td>
</tr>
<tr>
<td>12-oz. package of spaghetti</td>
<td>$1.19</td>
</tr>
<tr>
<td><strong>Dairy</strong></td>
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<tr>
<td>Plain Greek yogurt</td>
<td>$5.00</td>
</tr>
<tr>
<td>1 gallon 2% Milk</td>
<td>$3.75</td>
</tr>
<tr>
<td>Cottage cheese</td>
<td>$3.00</td>
</tr>
<tr>
<td>1 pound of butter</td>
<td>$2.28</td>
</tr>
<tr>
<td>Sliced cheese</td>
<td>$0.50</td>
</tr>
</tbody>
</table>
Cost-Effective Meals


My Plate


SNAP Program

# Weekly Meal Preparation Chart
*Tool to use at home for meal planning and grocery shopping*

<table>
<thead>
<tr>
<th></th>
<th>Breakfast</th>
<th>Snack</th>
<th>Lunch</th>
<th>Dinner</th>
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<tbody>
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</tbody>
</table>
Grocery Shopping List

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Session Five

Community and Social Supports
Handouts
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<th>G</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What is 1 source that you can use to learn more about a TIA?</strong></td>
<td><strong>What is an example of a good social support?</strong></td>
<td><strong>Name a reason why social supports are important</strong></td>
<td><strong>Name 2 ways to get to places</strong></td>
<td><strong>Name 1 reason why a social support is important</strong></td>
</tr>
<tr>
<td><strong>What is an example of a bad social support?</strong></td>
<td><strong>Name 1 food shelf you can get food every day of the week</strong></td>
<td><strong>Name a free coping skills app</strong></td>
<td><strong>Name 1 salvation army In Grand Forks</strong></td>
<td><strong>Where to find free events in the community?</strong></td>
</tr>
<tr>
<td><strong>Name 2 ways to stay in contact with your social support(s)?</strong></td>
<td><strong>Name 2 outdoor places to workout</strong></td>
<td><strong>Free Space</strong></td>
<td><strong>Name 1 social support</strong></td>
<td><strong>Name a free physical activity app</strong></td>
</tr>
<tr>
<td><strong>Name 2 outdoor places to workout</strong></td>
<td><strong>Name 1 place where you can go look information up</strong></td>
<td><strong>Name 2 social supports</strong></td>
<td><strong>Name 1 food shelf in Grand Forks</strong></td>
<td><strong>Name 1 soup kitchen</strong></td>
</tr>
<tr>
<td><strong>A place to check blood pressure</strong></td>
<td><strong>Name 1 reason why community resources are helpful</strong></td>
<td><strong>Name a free medication management app</strong></td>
<td><strong>Name a free deep breathing app</strong></td>
<td><strong>Name 1 thing that you like to do in the community currently</strong></td>
</tr>
<tr>
<td>B I N G O</td>
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</tr>
<tr>
<td>A place to check blood pressure</td>
<td>Name a free coping skills app</td>
<td>Name a free medication management app</td>
<td>Name a free deep breathing app</td>
<td>Name 1 thing that you like to do in the community currently</td>
</tr>
<tr>
<td>Name 1 food shelf in Grand Forks</td>
<td>Name 2 social supports</td>
<td>Name 1 place where you can go look information up</td>
<td>Name 2 ways to stay in contact with your social support(s)</td>
<td>Name 2 outdoor places to workout</td>
</tr>
<tr>
<td>Name 1 soup kitchen</td>
<td>Name 1 outdoor place for walking</td>
<td>Free Space</td>
<td>Name 1 social support</td>
<td>Name a free physical activity app</td>
</tr>
<tr>
<td>Name 1 salvation army In Grand Forks</td>
<td>Where to find free events in the community</td>
<td>What is 1 source that you can use to learn more about a TIA</td>
<td>What is an example of a good social support</td>
<td>Name a reason why social supports are important</td>
</tr>
<tr>
<td>Name 2 ways to get to places</td>
<td>Name 1 reason why a social support is important</td>
<td>Name 1 reason why community resources are helpful</td>
<td>What is an example of a bad social support</td>
<td>Name one food shelf you can get food every day of the week</td>
</tr>
<tr>
<td>B</td>
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</tr>
<tr>
<td>Name a free deep breathing app</td>
<td>Name 1 salvation army In Grand Forks</td>
<td>Where to find free events in the community</td>
<td>What is 1 source that you can use to learn more about a TIA</td>
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</tr>
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<td><strong>Free Space</strong></td>
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</tr>
<tr>
<td>Name 1 food shelf in Grand Forks</td>
<td>A place to check blood pressure</td>
<td>Name 1 reason why community resources are helpful</td>
<td>What is an example of a bad social support</td>
<td>Name 1 food shelf you can get food every day of the week</td>
</tr>
<tr>
<td>Name 1 soup kitchen</td>
<td>Name 1 outdoor place for walking</td>
<td>Name 1 place where you can go look information up</td>
<td>Name 2 social supports</td>
<td>Name 2 outdoor places to workout</td>
</tr>
<tr>
<td><strong>B I N G O</strong></td>
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<td><strong>What is 1 source that you can use to learn more about a TIA</strong></td>
<td><strong>Name a free deep breathing app</strong></td>
<td><strong>Name 1 thing that you like to do in the community currently</strong></td>
<td><strong>Name 2 ways to get to places</strong></td>
<td><strong>Name 1 reason why a social support is important</strong></td>
</tr>
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<td><strong>Name 1 place where you can go look information up</strong></td>
<td><strong>Name 2 social supports</strong></td>
<td><strong>Name 2 outdoor places to workout</strong></td>
<td><strong>Name 1 soup kitchen</strong></td>
<td><strong>Name 1 outdoor place for walking</strong></td>
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<td><strong>Name 1 salvation army In Grand Forks</strong></td>
<td><strong>Where to find free events in the community</strong></td>
<td><strong>Free Space</strong></td>
<td><strong>What is an example of a good social support</strong></td>
<td><strong>Name a reason why social supports are important</strong></td>
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<tr>
<td><strong>What is an example of a bad social support</strong></td>
<td><strong>Name 1 food shelf you can get food every day of the week</strong></td>
<td><strong>Name a free deep breathing app</strong></td>
<td><strong>Name 1 social support</strong></td>
<td><strong>Name a free physical activity app</strong></td>
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<td><strong>Name 2 ways to stay in contact with your social support(s)</strong></td>
<td><strong>Name 1 food shelf in Grand Forks</strong></td>
<td><strong>A place to check blood pressure</strong></td>
<td><strong>Name 1 reason why community resources are helpful</strong></td>
<td><strong>Name a free coping skills app</strong></td>
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</table>
**Community and Social Support handout**

**Food Resources**

**Cottonwood Community Church:**
- 308 S 5th St Grand Forks, ND
- (701)772-4126
- Thursday 6 to 8 PM

**Zion United Methodist Church:**
- 1001 24th Ave S Grand Forks, ND
- (701)772-1893
- Last Tuesday of each month

**St. Joseph Social Care & Thrift:**
- 620 8th Ave S Grand Forks, ND
- (701)795-8614
- Monday, Tuesday, Thursday 2PM to 4PM; Wednesdays 5 to 7 PM.

**Northland Rescue Mission:**
- 420 Division Ave Grand Forks, ND
- (701)772-6609
- Food available daily for lunch and dinner; also request food baskets

**The Salvation Army Grand Forks:**
- 1600 University Ave Grand Forks, ND
- (701)775-2597
- Picture ID and proof of current address required

**East Grand Forks Food Shelf:**
- 1715 3rd Ave NW Grand Forks, ND
- (218)773-8083
- Opens 10 AM on Fridays
- Food is provided off of family size & enough for 12 days per member

**Red River Valley Community Action:**
- 1013 N 5th St Grand Forks, ND
- (701)746-5431
- 60 and older, income qualifications, and receive every other month

**Physical Activity Supports**

**Grand Forks Park District**
- Parks, Golf Courses, Pools and Spray Parks, Arenas, Rentals, Community Garden
- [http://www.gfyparks.org/parks-facilities/](http://www.gfyparks.org/parks-facilities/)

**Columbia Mall**
- 2800 S Columbia Rd Grand Forks ND, 58203
- Indoor walking

**Grand Forks Rocks Facebook Page**
- Public Facebook group
- People decorate rocks and place them in public areas for you to search for. Go on a Rock hunt!

**YMCA**
- 215N 7th Street, Grand Forks ND 58203
- (701)775-2586

**30 Day Fitness Challenge (Free iPhone App)**
- 30 minutes a day

**Daily Workouts Fitness Trainer (Free iPhone App)**
- 5-30 minutes workouts with videos to show how to do each exercise

**Social Supports**

**Hope Church**
- 1601 17th Ave S, Grand Forks, ND 58201
- [https://www.gfhope.org/supportgroups](https://www.gfhope.org/supportgroups)

**Online Support Group**
**Library**

*East Grand Forks Campbell Public Library*
- 422 4th St SW, East Grand Forks, MN 56721
- Walk to library, use to research, educational materials, spend time with family

*Grand Forks Library*
- 2110 Library Circle, Grand Forks, ND 58201
- Walk to library, use to research, educational materials, spend time with family

**Health Supports (Blood Pressure Checks)**

*Third Street Clinic*
- 360 Division Ave #200, Grand Forks, ND 58201
- Requirements: no insurance, photo ID, latest tax return, documents that say you are not working, income level below 200% poverty level
- [https://www.thirdstreetclinic.org](https://www.thirdstreetclinic.org)

*CVS*
- 1950 32nd Ave S, Grand Forks, ND 58201
- Pharmacy and free blood pressure check machine
- [https://www.cvs.com/grand-forks](https://www.cvs.com/grand-forks)

*YMCA*
- 215N 7th Street, Grand Forks ND 58203
- (701)775-2586
- Health screen checks for blood pressure, resting heart rate, training heart rate, body fat analysis, fitness assessments, and balance and posture analysis

**Transportation**

*Cities Area Transit (CAT)*
- 450 Kittson Ave, Grand Forks, ND 58201
- (701)746-2600

**Stress Management Phone App’s**

*(Free)*

*Headspace*
- Guided meditation

*Stop Think Breathe*
- Emotion check-in, mediation and yoga

*Calm*
- Sleep short stories, guided mediation, breathing programs, stretching exercises, and relaxing music

*Happy Color*
- Relax through a coloring picture book

**Medication Management Phone App’s (Free)**

*Pill Reminder Medication Alarm*
- Enter name of medication, color, time of dose, and pick a sound

*MyTherapy: Medication Reminder*
- Reminder to take medication, weight, blood pressure and blood sugar

**Meal Preparation Phone App (Free)**

*Famealy*
- Meal calendar and planner for you and your family

**To learn more about TIA/Stroke**

*National Stroke Association*
- [https://www.stroke.org/understand-stroke/what-is-stroke/what-is-tia/](https://www.stroke.org/understand-stroke/what-is-stroke/what-is-tia/)

*American Stroke Association*
Session Six

Wrap-up to promoting wellness
Handouts
# Exercise Tracker

**HR** = Heart rate while working out  
**Activity** = What did you do today?  
**Time** = How long did you work out?

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Pre-Test

Handout
STOP Program Pre-test
Secondary TIA Outpatient Prevention Program

“Mini stroke” education:

1. On a scale of “not at all” to “very much”, how well do you understand what a transient ischemic attack or mini stroke is?

<table>
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<th>Not at all (1)</th>
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2. On a scale of “not at all” to “very much”, how well do you understand the chance of having a stroke after a transient ischemic attack or mini stroke?

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Self-Management:

3. On a scale of “not at all” to “very much”, how well are you watching your health needs?

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4. On a scale of “not at all” to “very much”, how often is it hard to follow your daily routine?

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Healthy Routine:

5. On a scale of “not at all” to “very much”, how well are you in charge of your stress levels?

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6. On a scale of “not at all” to “very much”, how likely are you to follow a healthy routine?

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Social and Community Supports:

7. On a scale of “not at all” to “very much”, how important do you think it is to reach out to people who support you?

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8. On a scale of “not at all” to “very much”, how comfortable are you reaching out to others for support?

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**Wellness:**

9. On a scale of “not at all (0 days)” to “very much (5-7 days)”, how often are you active during the week?

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10. On a scale of “not at all” to “very much”, how important do you think it is to do physical activity after a transient ischemic attack?

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**Other**

11. How do you feel this education course will change you?

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12. How do you get around? (Circle all that apply)
   a. Car
   b. Bus
   c. Cab
   d. Walking
   e. Another person drives me
   f. Other: ___________________________________________
Post-Test

Handout
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Other:

11. How do you feel this education course helped you to understand how you can help prevent a stroke from happening?

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12. On a scale of “not at all” to “very much”, how likely are you to use the information that was given during this course in your everyday life?

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