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Secondary Stroke Prevention and Support: An Occupational Therapy Program

Kaitlyn Bosch
University of North Dakota

Jamie St. Germain
University of North Dakota

Secondary Stroke Prevention and Support: An Occupational Therapy Program

By

Kaitlyn Bosch, MOTS & Jamie St. Germain, MOTS

Advisor: Janet Jedlicka, PhD, OTR/L, FAOTA

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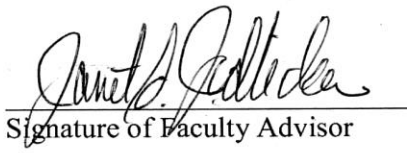

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Kaitlyn Bosch

4-9-18
Date

Jamie St. Germain

4/9/18
Date

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ABSTRACT

Many individuals in the United States experience a recurrent stroke and evidence suggests that strokes, primary and secondary, could be prevented through lifestyle modifications. The objective of the scholarly project was to develop an occupational therapy (OT) led secondary stroke prevention program to address modifiable risk factors for stroke. A literature review was conducted to identify research to support development of this program. Based on the review of literature and through the use of the Model of Human Occupation, The *Secondary Stroke Prevention and Support: An Occupational Therapy Program* was designed to address competence in the occupational role of managing health, through developing habits and routines to support a healthy lifestyle.

The *Secondary Stroke Prevention and Support: An Occupational Therapy Program* includes a facilitator's guide, participant handouts, and activity descriptions for each of the eight group sessions. The purpose for the Program is to reduce stroke recurrence and increase quality of life through increasing engagement in occupations including health management and maintenance. The Program is designed to be a community-based program targeting individuals who have had a stroke and who are at-risk for having another stroke. The Program provides support and education for individuals following a stroke as well as their support systems.

CHAPTER I

Introduction

Almost 800,000 people a year have a stroke in the United States (Centers for Disease Control and Prevention [CDC], 2017). The recurrence of strokes within the United States accounts for a large percentage of the strokes occurring each year. Approximately a quarter of people who experience a stroke have had one in the past (CDC, 2017). As reported by the National Stroke Association (2017), stroke recurrence is associated with an increased incidence of mortality, and the recurrent stroke event will lead to poorer outcomes regarding function. Due to the substantial number of people experiencing stroke recurrence, there is a need to focus on developing interventions to reduce the risk in this population. Secondary stroke prevention is a concept referring to interventions used to help reduce the incidence of stroke recurrence for individuals who have experienced a stroke (Kim, Thrift, Nelson, Bladin, & Cadilhac, 2015; Schmid, Butterbaugh, Egolf, Richards, & Williams, 2008). The population of interest for this program is community-dwelling adults who have experienced a stroke, and who are at-risk for experiencing future strokes, as well as their support persons.

Stroke prevention is a vital and important issue for healthcare professionals to address. Occupational therapists are healthcare professionals, and their role in the healthcare profession is to enable people to engage in meaningful activities, or occupations. Occupational therapists are familiar with the stroke population and the role of rehabilitation is well-established. In this role, occupational therapists rehabilitate an

individual after a stroke has occurred to help them re-establish skills and make adaptations to activities to increase functioning in daily life (American Occupational Therapy Association [AOTA], 2014). A less implemented, but equally important role for occupational therapists working with the stroke population is prevention. According to the AOTA (2014), prevention is an intervention and outcome of occupational therapy services. There is evidence indicating that occupational therapists are not regularly executing prevention and health promotion interventions when working with patients who are recovering from a stroke (Schmid et al., 2008). The purpose of this project is to develop a secondary stroke prevention intervention delivered by occupational therapists to expand the role of prevention. This product will provide resources for occupational therapists to meet the needs of secondary stroke prevention and may also be used with clients who are at-risk.

There are both non-modifiable and modifiable risk factors that increase a person's chances of experiencing a stroke (Bartels, Duffy, & Beland, 2016; Deijle et al., 2017). Nearly 80% of strokes could be prevented through modification of lifestyle habits that put an individual at-risk for a stroke (CDC, 2017). Prevention interventions are necessary to help individuals develop skills needed to reduce their stroke risk. Prevention is within the scope of occupational therapy, and occupational therapists are well-equipped to help individuals develop skills needed to modify habits and routines to support a healthier lifestyle (AOTA, 2014). Occupational therapists are also involved in the rehabilitation process for individuals post-stroke and have a strong understanding of the rehabilitation process; occupational therapists can provide realistic expectations and support for

individuals and their families as they navigate the recovery process (Bartels et al., 2016; Woodson, 2014).

Occupational therapy can provide a unique perspective regarding prevention interventions. The proposed occupational therapy intervention is a community-based secondary stroke prevention and support program with a focus on providing education about self-management principles that will address modifiable risk factors for stroke and enable individuals to make changes to their lifestyle. The intended outcome of this program is not only to reduce stroke risk, but also increase the quality of life and overall health in this at-risk population through promoting occupational engagement in health management and maintenance.

According to research, there is support for utilizing self-management strategies to reduce the rate of stroke recurrence (Sakakibara, Kim, & Eng, 2017). There was limited information found on occupational therapy-focused secondary prevention interventions. Thus, highlighting the need for the creation of a product for secondary stroke prevention focusing on the unique role of occupational therapy. The title of the product designed is *Secondary Stroke Prevention and Support: An Occupational Therapy Program*. The Model of Human Occupation (MOHO) was used to guide development. In MOHO, the interaction of the components of the person and the environment impact occupational participation to support the two components of occupational adaptation: occupational identity and competence (Kielhofner, 2008). The purpose of using this model is to support the outcome of occupational identity and competence as a self-manager of one's health.

Key Terms/Concepts

Key terms and concepts that are included throughout this scholarly project are defined:

- Habituation: "… an internalized readiness to exhibit consistent patterns of behavior guided by habits and roles and fitted to the characteristics of routine temporal, physical, and social environments" (Kielhofner, 2008, p. 52).
- Modifiable risk factors: Actions or medical conditions that increase an individual's chance of experiencing a stroke that could be altered through behavior change or specific medical intervention (CDC, 2017; Deijle et al., 2017).
- Occupational adaptation: "… the construction of a positive occupational identity and achieving occupational competence over time in the context of one's environment (Kielhofner, 2008, p. 107).
- Occupational competence: "… the degree to which one sustains a pattern of occupational participation that reflects one's occupational identity" (Kielhofner, 2008, p. 107).
- Occupational engagement: "… doing, thinking, and feeling under certain environmental conditions…" (Kielhofner, 2008, p. 171).
- Occupational identity: "… a composite sense of who one is and wishes to become as an occupational being generated from one's history of occupational participation" (Kielhofner, 2008, p. 106).
- Occupational participation: "… refers to engaging in work, play, or activities of daily living that are part of one's sociocultural context and that are desired and/or necessary to one's well-being" (Kielhofner, 2008, p. 101).

- Performance capacity: "… the ability to do things…" (Kielhofner, 2008, p. 68).
- Personal causation: "… one's sense of capacity and effectiveness" (Kielhofner, 2008, p.13).
- Secondary prevention: "… limiting the development of secondary conditions and their subsequent impact on function and quality of life" (AOTA, 2013, p. S49).
- Secondary stroke prevention: The use of pharmacological and nonpharmacological approaches to reduce stroke risk in individuals who have a history of stroke or TIA (Kim et al., 2015; Schmid et al., 2008).
- Self-management: "... the individual's ability to manage the symptoms, treatment, physical and psychosocial consequences and lifestyle changes inherent in living with a chronic condition." (Sakakibara et al. 2017, p. 43).
- Stroke: A health condition resulting from insufficient oxygen to the brain cells, which leads to death in these cells (Bartels et al., 2016).
- Volition: "… a pattern of thoughts and feelings about oneself as an actor in one's world which occurs as one anticipates, chooses, experiences, and interprets what one does" (Kielhofner, 2008, p. 16).

Chapter II presents the results of a thorough literature review in addition to an introduction of the product. Chapter III presents the methodology and the activities used to develop the product. An overview of the product is presented in Chapter IV. Chapter V is a summary of the project and includes recommendations and limitations of the product. Finally, the product in its entirety will be available in the Appendix.

CHAPTER II

Literature Review

It is estimated almost 800,000 people in the United States experience a stroke every year, and individuals who experience a stroke are at an increased risk for having a recurrent stroke (Centers for Disease Control and Prevention [CDC], 2017). A stroke, or cerebrovascular accident (CVA), is a condition caused by a lack of oxygen to the brain, which results in the death of the cells in the brain (Bartels et al., 2016). There are two main categories of strokes: ischemic and hemorrhagic (Bartels et al., 2016). An ischemic stroke occurs when a blood vessel in the brain becomes blocked, and can be further classified as a thrombosis or an embolism (Woodson, 2014). A thrombosis is a blockage in a cerebral vessel, whereas an embolism develops elsewhere in the body and then is carried in the bloodstream to the brain resulting in a blockage (Woodson, 2014). Stroke, regardless of type, is one of the primary causes of death and disability for individuals within the United States (CDC, 2017). Nearly 25% of people who have had a stroke experience a subsequent stroke (CDC, 2017). The risk of recurrence for strokes increases over time, with the risk at one-year post-stroke being 11%, whereas the risk after ten years increases to 40% (Kim et al., 2015). Additionally, individuals who have experienced a transient ischemic attack are also at-risk for having a stroke. A transient ischemic attack (TIA) is similar to an ischemic stroke in that the primary deficits are alike; however, TIAs are less severe, and symptomatology does not last more than twenty-four hours (Bartels et al., 2016). Due to the impact of stroke on a person's

abilities and health, there is a need to prevent the occurrence of strokes, specifically recurrent strokes. Recurrent strokes are associated with increased mortality, as well as a more significant impact on one's functional abilities (National Stroke Association, 2017). Thus, prevention of stroke recurrence is imperative. A thorough literature review was conducted. This literature review addresses risk factors for stroke, with an emphasis on modifiable risk factors. Common problems that occur following a stroke are addressed along with the impact of stroke on an individual's occupational functioning. Secondary stroke prevention is defined, and the importance of prevention is explored. In addition, current secondary stroke prevention programming is presented, and recommended qualities for prevention programs are addressed. The role of occupational therapy in secondary stroke prevention is addressed, and the gap in the literature describing the specific role of occupational therapy in secondary stroke prevention is highlighted in order to justify the purpose of our product. Lastly, barriers to implementing secondary stroke prevention programs are identified.

Modifiable risk factors associated with stroke

According to Bartels et al. (2016), "Stroke is essentially a preventable disease with known manageable risk factors" (p. 2). However, a majority of individuals who experience a stroke or a TIA are unable to manage their risk factors (Damush et al., 2011). Risk factors for stroke can be categorized as modifiable and non-modifiable (Bartels et al., 2016; Deijle et al., 2017). Non-modifiable risk factors include age, race and heredity (CDC, 2017). Modifiable risk factors can be further categorized into behaviors that can be changed through altering the behavior, as well as health conditions that can be changed through medical means (CDC, 2017; Deijle et al., 2017). Health

conditions that increase a person's stroke risk include hypertension, hyperlipidemia, heart disease, atrial fibrillation, and diabetes mellitus (Bartels et al., 2016; CDC, 2017). According to Deijle et al. (2017**)**, hypertension, or high blood pressure, is the most prominent and strongest predictor of stroke**.** Modifiable behaviors that increase one's risk for stroke include poor diet, limited physical exercise, smoking and tobacco use, and alcohol use (Bartels et al., 2016; CDC, 2017). Another modifiable risk factor that can contribute to stroke occurrence is stress (Lawrence, Booth, Mercer, & Crawford, 2013). Nearly 80% of strokes could be prevented by modification of one's behaviors and lifestyle and managing one's health conditions (CDC, 2017). This highlights an important consideration for secondary prevention of stroke. Controlling risk factors for stroke is important because a stroke can have a widespread impact on a person's life and abilities, and for some, the effects of a stroke last a lifetime.

Impact of stroke on occupational functioning

Following the occurrence of a stroke, an individual may encounter difficulties with occupational functioning due to problems related to the stroke. "Occupational functioning is the successful interaction of the person with the objects, situations, and the surroundings of his or her home, family, and community" (Trombly-Latham, 2014, p.8). The impact of the stroke on function is dependent upon the type and severity of the stroke, as well as what part of the brain was impacted (Woodson, 2014). There are a variety of problems that may occur following a stroke, and they include physical limitations, such as paralysis, paresis, and incontinence; as well as cognitive limitations, and limitations in speech, such as aphasia (CDC, 2017; Damush et al., 2011; Woodson, 2014). The results of a stroke may impair an individual's sensation, as well as cause

vision difficulties and dysphagia. Additionally, depression and anxiety are possible following a stroke (CDC, 2017; Damush et al., 2011; Woodson, 2014). A stroke can impact a person's ability to complete occupations in all areas, and a person must cope with the changes in his or her abilities to engage in meaningful occupations (American Occupational Therapy Association [AOTA], 2014; Damush et al., 2011).

Recurrent Stroke Prevention

What is secondary stroke prevention?

Primary stroke prevention is referred to as the utilization of preventative techniques by individuals who have not experienced a stroke or TIA (Ellis, Barley, & Grubaugh, 2013; Kim et al., 2015). Secondary stroke prevention is similar to primary stroke prevention in that the techniques are similar; however, the strategies are utilized with individuals who have a history of stroke or TIA (Kim et al., 2015; Schmid et al., 2008). Secondary stroke prevention strategies include pharmacological and nonpharmacological approaches (Kim et al., 2015; Schmid et al., 2008). Secondary stroke prevention is crucial because individuals who have experienced a stroke or TIA are more likely to have other comorbidities, recurrent strokes, and psychological conditions, such as depression (Sakakibara et al., 2017; Towfighi et al., 2017). Due to these high demands, individuals with a history of cerebrovascular events are more likely to utilize healthcare services (Sakakibara et al., 2017; Towfighi et al., 2017). Thus, secondary stroke prevention is instrumental in lowering the need for medical services, thereby reducing healthcare costs. Reducing healthcare costs is just one reason highlighting the importance of secondary stroke prevention.

The importance of secondary stroke prevention

Lessening the recurrence of stroke is the top aim of secondary prevention (Sit, Yip, Ko, Gun, & Lee, 2007). Evans-Hudnall et al. (2014) indicated that there are multiple benefits of secondary stroke prevention efforts, but the authors pointed out that most notably is the information provided to stroke survivors that equips them with the knowledge needed to seek medical services in the instance of a recurrent stroke. Recognition and early intervention can help to decrease the impact of the stroke on a person's function (Evans-Hudnall et al., 2014); thereby also decreasing services needed for rehabilitation and other needs, which will decrease healthcare costs. Ellis et al. (2013) and Sit et al. (2007) also indicated the importance of educating patients, as well as their families, about the signs and symptoms of a stroke, and how to respond appropriately by seeking medical services in the case of a suspected stroke. Ellis et al. (2013) specified that increasing individuals' knowledge about strokes, and educating individuals regarding the symptoms of a stroke, as well as the risk factors is crucial to secondary stroke prevention.

Despite the acknowledged importance of secondary stroke prevention, there is a need for improvement. Ellis et al. (2013) completed a systematic review and found evidence that stroke survivors were lacking the stroke knowledge necessary to prevent recurrent strokes. Ellis et al. (2013) found that stroke patients did not have adequate knowledge of stroke risk factors and symptoms, and additionally did not even have a sufficient basic understanding of the stroke condition. A study by Kim et al. (2015) also found that individuals did not understand the cause of their stroke. This lack of knowledge was anxiety-provoking for the patients in the study (Kim et al., 2015). Stress

is considered a risk factor for stroke (Lawrence et al., 2013), and the limited knowledge stroke patients have regarding their condition may lead to increased stress for this population, in turn increasing the risk of experiencing another stroke. Essentially, inadequate stroke knowledge may be increasing stroke patients' risk for recurrent strokes. Thus, secondary stroke prevention and education is necessary for the health of patients following a stroke. Ellis et al. (2013) indicated that the lack of knowledge of patients who have had a stroke should be alarming to healthcare personnel.

Current stroke prevention information and programs

There is evidence of the need for the provision of secondary stroke prevention programs for patients who have had a stroke. A number of secondary stroke prevention programs aimed at providing education and reducing the occurrence of strokes have been studied; however, many of these programs were not comprehensively described. The information obtained through secondary stroke prevention interventions may include stroke education as well as education on how to live a healthy life and the importance of adapting healthy behaviors for stroke prevention (Lawrence, Pringle, Kerr & Booth, 2016). In a study where a secondary prevention support program was implemented in comparison to standard stroke rehabilitation, risk factor control was found to be more effective for individuals in the support program (Leistner et al., 2012). In a randomized clinical trial, a self-care prevention program was examined to see the impact of anxiety and depression on the adaptation of behaviors related to secondary stroke prevention (Evans-Hudnall et al., 2014). In the study, there was an association found between anxiety and smoking cessation and individuals with higher anxiety were less likely to stop smoking during the prevention program (Evans-Hudnall et al., 2014). This shows

that despite having knowledge of risk factors for stroke and being provided with the skills to make behavior changes, the inability to cope with anxiety and stress following a stroke negatively impacts a person's ability to make a change. Due to the correlation between strokes and psychological stress, "...equipping patients with skills and coping strategies to help reduce or manage perceived psychological stress, may represent an important secondary prevention intervention" (Lawrence et al., 2013, p. 466). Lawrence et al. (2013) examined mindfulness-based interventions to determine if this technique could help individuals who had experienced a stroke to cope with the event. There were only four articles that met full criteria to be included in the review, and the results of the small study were not significant, however there was a positive effect for the intervention (Lawrence et al., 2013).

Stroke prevention programs have aimed at helping patients who have had a stroke gain knowledge about stroke and manage the risk factors in order to reduce the chances of a recurrent stroke and help support a healthy lifestyle. Sit et al. (2007) evaluated a secondary stroke prevention group intervention that consisted of eight weekly, two-hour sessions that taught the group members ways to self-monitor their health and manage their condition through goal development and action planning. Topics covered in the group included stroke facts, healthy lifestyle choices including diet and exercise, and medication management (Sit et al., 2007). The results indicated that the intervention significantly improved participants' knowledge about stroke and improved health management behaviors including medication compliance and blood pressure monitoring (Sit et al., 2007). According to Evans-Hudnall et al. (2014) secondary stroke prevention was found to have a positive impact on improving stroke knowledge, reducing the

consumption of tobacco and alcohol products in comparison to standard stroke rehabilitation.

In addition, secondary stroke prevention was found to be effective in reducing risk factors for individuals within at-risk populations and ethnic and racial minority groups (Evans-Hudnall, 2014). The results of a pre- and post-test cohort study found that a secondary stroke prevention program was shown to improve systolic blood pressure, hemoglobin, and low-density lipoprotein levels (Choi, Han, Li, Kung, & Lam, 2015). The secondary stroke prevention program was not described in detail; however, Choi et al. (2015) stated that a major focus was on educating patients on modifying risk factors. In addition to improvements in health, stroke prevention programs have been shown to have a positive impact on reducing smoking and alcohol consumption, as well as increasing regular exercise, eating well-balanced meals, monitoring one's body mass index, and improving quality of life (Choi et al., 2015; Lawrence, Kerr, McVey, & Godwin, 2012). Lawrence et al. (2012) completed a systematic review and also found evidence for the effectiveness of secondary stroke prevention interventions for improving diet and exercise habits. The results of the study showed a significant reduction in blood pressure, body mass index, and cholesterol (Lawrence et al., 2012). These studies demonstrate that secondary stroke prevention programs can make an impact on management of modifiable risk factors, which are major contributing factors to recurrent strokes.

There is some evidence of the effectiveness of current stroke prevention interventions, but there continues to be a need for further research and understanding. Within the literature, two current studies are being conducted to examine secondary stroke prevention interventions that target specific groups. One study is examining the

PRAISE intervention (Goldfinger et al., 2012). PRAISE stands for Prevent Recurrence of All Inner-city Strokes through Education. PRAISE is a current secondary prevention workshop that was designed to enable individuals to create an action plan to increase control of personal risk factors (Goldfinger et al., 2012). The PRAISE workshop consists of weekly, 90-minute sessions for six weeks (Goldfinger et al., 2012). Participants are educated on stroke information and prevention, monitoring blood pressure and LDL cholesterol, medicine treatment options, as well as the importance of collaborating and communicating with healthcare team members. Each participant creates their own action plan and reports back to their group the following week regarding their progress. According to Goldfinger et al. (2012), "the PRAISE participants are a racially and ethnically diverse group, of whom only one third have control of the three major risk factors for recurrent stroke and only two thirds have blood pressure at goal" (p. 1071). The population that is targeted for this study are individuals from high-risk, urban environments (Goldfinger et al., 2012). Individuals from this community have been shown to be at an increased risk of recurrent strokes (Goldfinger et al., 2012), thus highlighting the need to explore interventions for this target population in order to improve secondary stroke prevention.

Another ongoing study for a specific high-risk population is a randomized controlled trial being conducted by Towfighi et al. (2017) to examine the effectiveness of the SUCCEED intervention. SUCCEED stands for Secondary stroke prevention by Uniting Community and Chronic care model teams Early to End Disparities. The purpose of this study is to determine the impact of the intervention on stroke risk factor improvement for diverse individuals who have experienced a stroke (Towfighi et al.,

2017). The SUCCEED intervention includes clinic visits, home visits, telephone coordination, and the option to participate in a self-management program. The intervention spans over the course of a year, and the amount of contact is dependent on the needs of the individual (Towfighi, et al., 2017). As both the PRAISE and SUCCEED programs are ongoing, the results of these studies will help to discover barriers to current secondary stroke prevention interventions within at-risk and diverse populations, as well as provide relevant information to improve secondary stroke prevention interventions for all individuals following a stroke.

Self-management interventions

There was a variety of secondary stroke prevention programs found, but a common secondary stroke prevention method found within the literature was self-management interventions. According to Barlow, Wright, Sheasby, Turner, and Hainsworth (2002), "Self-management refers to the individual's ability to manage the symptoms, treatment, physical and psychosocial consequences and lifestyle changes inherent in living with a chronic condition" (p. 178). Sit et al. (2007) stated secondary stroke prevention can be described as a self-care intervention because it relies heavily on individual involvement in management of one's health. The authors add that it is important to not only educate patients, but also enable them with skills to take responsibility for managing their health (Sit et al., 2007). Stroke is a chronic condition that the principles of self-management can be applied to, whereby self-management is the process of taking control of one's health and learning how to live after a stroke. Management of a condition is the responsibility of the individual with the chronic condition, but health care providers can provide interventions and education to support

self-management and equip individuals with skills to be effective self-managers (Lorig et al., 2012).

According to Vance and Siebert (2009), self-management support is a role within the occupational therapy profession. The authors identified that two key components of self-management for people with chronic conditions, such as stroke, are adopting and adapting behaviors, habits, and routines (Vance & Siebert, 2009). Adopting is required when behaviors, habits, and routines are absent, while adapting is needed when they are present but require altering (Vance & Siebert, 2009). Adopting behaviors, habits, and routines is necessary for individuals post-stroke to incorporate new skills into daily life to prevent future strokes. Adapting behaviors, habits, and routines is necessary to adjust to changes in abilities that affect occupational functioning in order to support performance in meaningful occupations.

Self-management skills related to secondary stroke prevention include: coping with the condition, engaging in daily activities, and handling emotions that impact one's daily life (Lorig et al., 2012). Coping with a stroke involves gaining knowledge about strokes, incorporating new treatment methods into daily routines, such as taking medication or following more strict diets, and making regular appointments with health professionals (Lorig et al., 2012). Following a stroke, engaging in daily activities is critical. However, for some individuals this may involve adapting or modifying the way in which these tasks are completed. Through self-management training, individuals are able to learn skills needed to modify their daily activities and adapt their environments to promote occupational engagement (Lorig et al., 2012). Lastly, according to Lorig et al. (2012) self-management involves handling various emotions. When an individual is

diagnosed with a medical condition or experiences a condition with long-lasting health impacts, such as a stroke, several emotions are experienced. Self-management of these emotions is important to ensure individuals are coping with their emotions in an appropriate manner (Lorig et al., 2012).

According to Lorig et al. (2012), several tools are essential to self-management of chronic conditions, such as strokes. Three important tools include problem-solving, decision-making, and action planning (Lorig et al., 2012). The components that make up problem-solving are identifying the issue, generating ways to solve the problem, picking an idea and trying it, and evaluating the results. If a problem has not been resolved, consult professionals for other solutions or cope with the issue and accept that it cannot be solved at this time. Decision-making involves generating options, reflecting on personal desires, creating pros and cons lists, rating each option and weighing its worth, and choosing an option. According to Lorig et al. (2012) action planning comprises goal-setting. Goals needs to be specific, attainable, and measurable. To promote success, it is important that individuals create goals that they desire to achieve, and that individuals reward themselves throughout the process for reaching specific milestones (Lorig et al., 2012).

Many of the tools and skills for stroke management are applicable to other chronic conditions, and stroke is not the first chronic condition where self-management interventions have been used. In fact, according to Wolf and Doherty (2017), research for self-management interventions for the stroke population is newly developed, and the evidence is lacking compared to research for other chronic conditions. Self-management interventions have been applied to a variety of chronic conditions and according to

Damush et al. (2011), the amount of evidence varies for different chronic conditions. Kitchens, Miller, Brewer, and Fonseca (2016) indicated that self-management interventions have been found to be effective with conditions including diabetes, arthritis and chronic pain.

Richardson et al. (2014) completed a scoping review to understand the role of occupational therapy and physiotherapy in self-management interventions for individuals with chronic diseases. The authors found occupational therapists provided self-management interventions to a variety of diagnoses, including diabetes, arthritis, and chronic obstructive pulmonary disorder. Interventions consisted of a variety of topics, such as relaxation techniques, joint protection, energy conservation, risk factor modification, and physical activity (Richardson et al., 2014). Other topics covered by occupational therapists included information about nutrition, managing medications and managing stress; however, the authors suggested that some therapists question if these topics are within the role of an occupational therapy practitioner (Richardson et al., 2014). Upon completing a scoping review of evidence, Richardson et al. (2014) found that occupational therapists provide self-management interventions to various populations of individuals with chronic conditions; however, they did not find evidence of occupational therapy's involvement in providing self-management interventions to individuals who have had stroke. According to the literature there is a need for further research for self-management following a stroke, but there were some studies found for this population (Wolf & Doherty, 2017).

One study was a pilot randomized controlled trial by Damush et al. (2011) to determine the effectiveness and practicality of a self-management intervention for a

population of veterans who had experienced a stroke. The intervention had a standardized manual and was delivered over the phone, with each session focusing on improving self-efficacy and modifying behaviors (Damush et al., 2011). A variety of stroke-related topics were covered, from generalized information about stroke, to specific self-management techniques such as creating a daily schedule (Damush et al., 2011). According to Damush et al. (2011), "participating in a stroke self-management intervention may improve a stroke survivor's self-efficacy to communicate with providers, improve time spent in exercise (e.g., walking) and improve stroke specific quality of life" (p. 570). Although there were favorable results in regards to this intervention, the statistical power of the study is limited due to the sample size (Damush et al., 2011). Another pilot program was studied by Kitchens et al. (2016) to examine the effectiveness of an interdisciplinary self-management program for stroke patients. The program focused on educating patients and helping them learn to implement healthy choices for physical activity, nutrition, and coping. The preliminary findings showed the participants reported increased self-management behaviors as well as increased satisfaction (Kitchens et al., 2016).

A review conducted by Sakakibara, et al. (2017) studied the effectiveness of self-management interventions for managing stroke risk factors. The authors concluded, "At the individual risk factor level, our results show that self-management interventions have a significant effect at improving medication adherence. This is an important finding because studies consistently show medication adherence to be suboptimal within the stroke population…" (p. 50). A study by Barker-Collo et al. (2015) found that the use of motivational interviewing also helped to improve medication adherence for individuals

who have had a stroke. Another way to foster medication adherence and other self-management behaviors is to provide individuals with the knowledge in order to make effective changes in their daily routines (Gustafsson, Hodge, Robinson, McKenna, & Bower, 2010). According to Leistner et al. (2012), other self-management behaviors targeted in current secondary stroke prevention programs include: managing blood pressure, physical activity, nutrition, anticoagulant/antiplatelet therapy, and nicotine cessation. Specific self-management behaviors that are focused on during therapy depends on the needs and goals of each individual and should be individualized to support their progress.

Qualities of stroke prevention programs

There were a variety of different methods used in the stroke prevention interventions found within the literature; however, there was some consistency found regarding qualities of programs that made them effective for this population. Three key components were acknowledged as being fundamental to secondary stroke prevention. These components were knowledge, behavior, and motivation. The first component was knowledge. Both, Ellis et al. (2013) and Green, Haley, Eliasziw, and Hoyte (2007) indicated that a central element to secondary stroke prevention is the provision of information about stroke and the risk factors of stroke. Additionally, Ellis et al. (2013) included symptoms of stroke as another piece of information that should be included in secondary prevention interventions. Ellis et al. (2013) found providing knowledge to patients about their condition was an integral component of stroke prevention and is the precursor to behavior change.

Changing lifestyle behaviors was identified as the second component of secondary prevention (Green et al., 2007). Behaviors that increase the risk for stroke were determined to be the targeted behaviors for secondary stroke prevention interventions (Lawrence et al., 2012). These behaviors included diet, exercise, alcohol use, and smoking (Deijle et al., 2017; Lawrence et al., 2012). Medication management was also seen as an important behavioral topic to address for secondary stroke prevention (Deijle et al., 2017), as well as coping skills needed to help individuals manage stress (Lawrence et al., 2013). Sakakibara et al. (2017) indicated that secondary prevention interventions should be comprehensive, and address all risk factors for stroke, rather than focus on one behavior such as changing dietary habits.

Helping patients make changes to their behaviors in order to reduce the risk of stroke was important, and patients following a stroke must be equipped with the needed tools to make change, and they must also be motivated to make the change (Green et al. (2007). Thus, motivation was a third key component to secondary stroke prevention. Different individuals may be motivated by different things, thus individualizing interventions and incorporating a person's values was important for secondary stroke prevention (Kim et al., 2015). In one study, a technique used to promote behavior change was motivational interviewing; the authors found the intervention helped to improve self-reported medication adherence for participants (Barker-Collo, 2015).

Motivation, knowledge, and behavior were important to consider when developing secondary stroke prevention interventions. Additionally, there were specific qualities that were recommended for stroke prevention programs to help increase the effectiveness and success. Deijle et al. (2017) completed a systematic review and meta-

analysis to evaluate the effectiveness of lifestyle interventions, and the authors were also able to determine how different qualities of lifestyle interventions, such as the timing and duration of the intervention, impacted outcomes. One quality that was found to be important was repetition. Both Deijle et al. (2017) and Green et al., (2007) noted that secondary stroke prevention interventions should include more than one session and Deijle et al. (2017) recommended multiple sessions and recommended the sessions span over a four-month period at minimum. According to Green et al. (2007), multiple sessions were necessary to help achieve personal behavior change. Green et al. (2007) completed a randomized controlled trial and found that a single motivational interviewing session was found to significantly improve participants' knowledge about stroke, but there was not a significant change in behavior; thus, multiple sessions are necessary to achieve behavior change. Additionally, to assist with behavior change, the intervention should incorporate at least three behavior change tools (Deijle et al., 2017). Individuals should also be given the chance to practice using the tools in order to increase success (Gustafsson et al., 2010). These qualities will help to increase the carryover of learning to daily life as well as increase the overall success of prevention programs.

There were also some recommended guidelines for providing education to improve knowledge. Gustafsson et al. (2010) recommended that knowledge should be provided in both oral and written formats. The format of the presented information is important for the success of the intervention, as well as who is presenting the information. According to Lawrence et al. (2016), it is critical for patients to understand the knowledge and expertise that healthcare providers have to be able to be trusted and viewed as credible sources of information.

Beyond knowledge, there is also a need for secondary stroke prevention interventions to provide support to individuals, thus social support is another key quality in secondary stroke prevention. Support can help to motivate individuals, and it can be found in several different forms (Kim et al., 2015; Lawrence et al., 2016). Kim et al. (2015) suggested including family members as well as friends in interventions. Lawrence et al. (2016) agreed, and also suggested that healthcare providers are a healthy source of support. Lawrence et al. (2016) completed a study to understand the experience of participating in a secondary stroke prevention intervention from the viewpoint of individuals who have had a stroke and family members. The authors found that group interventions, where individuals share common experiences, have been found to be good sources of encouragement (Lawrence et al., 2016). Furthermore, Lawrence et al. (2016) found that by gaining knowledge, seeking advice from health care professionals, and having social support, individuals had increased confidence in their ability to manage risk factors and overcome fears. There are many qualities to consider when developing a secondary stroke prevention intervention, and one final suggestion from Deijle et al. (2017) was to choose a theoretical model to serve as the basis for development decisions.

Role of OT

Secondary stroke prevention is an issue that can be addressed by a variety of healthcare professionals, including occupational therapists. Occupational therapists often work with individuals who have experienced a stroke in a rehabilitation context. Providing information to patients is also a major role of an occupational therapist working with an individual who had experienced a stroke. Tooth and Hoffmann (2004) completed a study and found that occupational therapists had a prominent role in the

delivery of information to patients who had experienced a stroke. Gustafsson et al. (2010) also described occupational therapists as information providers. The information occupational therapists provided to the stroke patients mostly related to stroke recovery and the impact of the stroke on functioning (Gustafsson et al., 2010; Tooth & Hoffmann, 2004). Additionally, information regarding interventions for remediation of function and compensatory options for limitations, such as use of assistive technology, was provided by occupational therapists (Gustafsson et al., 2010).

Occupational therapists are well-equipped to assist individuals following a stroke by providing interventions for establishing and restoring skills, as well as adapting to limitations caused by the incidence of stroke (AOTA, 2014). Persons who receive occupational therapy services following a stroke develop significantly greater independence in their ability to complete activities of daily living (ADLs) and instrumental activities of daily living (IADLs) (Legg et al., 2006). According to the American Occupational Therapy Association (AOTA) (2014), some intervention approaches occupational therapists use to help individuals achieve greater independence include establish, restore, and modify. Another intervention approach in the Occupational Therapy Practice Framework (OTPF) is prevent (AOTA, 2014). AOTA (2013) classified prevention into three categories: primary, secondary, and tertiary. Secondary prevention was defined as "…limiting the development of secondary conditions and their subsequent impact on function and quality of life" (p. S49). Prevention is also described as a therapeutic outcome in the OTPF (AOTA, 2014). Prevention is within the scope of occupational therapy practice, and occupational therapists are qualified professionals who

can provide prevention interventions to reduce the recurrence of stroke and improve quality of life.

Schmid et al. (2008) further clarified the role of occupational therapy for secondary stroke prevention. Schmid et al. (2008) indicated occupational therapists are qualified health professionals and are experts in regards to enabling patients to establish healthy routines and develop the skills needed to manage medications appropriately. Schmid et al. (2008) explored occupational therapists' current implementation of secondary stroke prevention interventions. The authors examined therapists within the Veterans Affairs (VA) system, and found that the stroke prevention information occupational and physical therapists addressed while working to rehabilitate patients who had experienced a stroke was related to lifestyle choices such as encouraging exercise, as well as how to manage medications and high blood pressure (Schmid et al., 2008). The authors indicated that the most common method of delivering prevention information to patients was verbally, followed by written information (Schmid et al., 2008). Gustafsson et al. (2010) also found that verbal and written information was a preferred method for therapists to use to provide information to patients. Stroke recipients are also in agreement according to Tooth and Hoffmann (2004) as they found that patients liked to receive information orally and in person from health care providers. Regardless of how information is provided, it is an important component of an occupational therapist's role, and information about prevention is within occupational therapy's scope of practice. However, there is evidence that occupational therapists' secondary stroke prevention interventions are inadequate.

Gaps in prevention role

Within the literature, there was limited information regarding occupational therapists' role in stroke prevention. One study by Schmid et al. (2008) examined how occupational therapists, as well as physical therapists, incorporated prevention interventions into a rehabilitation context. Schmid et al. (2008) found that the therapists in the study were not adequately including prevention interventions while working in a traditional rehabilitation setting with individuals who had experienced a stroke. Thirty-five percent of therapists included in the study reported that they do not discuss stroke recurrence with their patients. Less than 50% of therapists reported they provided health promotion and prevention interventions, and the majority of therapists providing these interventions were not occupational therapists. Occupational therapists reported including health promotion and prevention interventions significantly less than physical therapists in the study. One reason was some occupational therapists believed that prevention was not the job of the therapist (Schmid et al., 2008). The authors of the study highlight the fact that the need for prevention interventions for individuals following a stroke is not being addressed by occupational therapists within a rehabilitation context despite the fact that prevention is within occupational therapy's scope of practice (Schmid et al., 2008).

Damush et al. (2011) also indicated that occupational therapists, among healthcare providers in general, are not providing the necessary interventions for prevention of recurrent stroke. Tooth and Hoffmann (2004) examined the issue from the perspective of the patient to understand the information patients following a stroke received from healthcare professionals while in rehabilitation. The authors found that the participants sought more information than they received (Tooth & Hoffmann, 2004). Specifically,

over one-third of the participants in the study indicated wanting more education regarding a variety of topics including prevention of recurrent strokes as well as connection to support groups. Many of the participants reported having to request information (Tooth & Hoffmann, 2004). The information participants requested is well within the scope of occupational therapy.

Barriers to providing secondary stroke prevention

There is a need to improve secondary stroke prevention efforts, specifically from an occupational therapy standpoint, and one way to improve prevention is by addressing current barriers. There are several barriers to secondary prevention of strokes. According to Green et al. (2007), time restraints can be a barrier to teaching patients about strokes, strokes risk factors, and modifying one's lifestyle to reduce these risks. Due to productivity demands and high caseloads, secondary prevention information is commonly provided to patients through brochures and pamphlets, rather than one-to-one sessions with a health care professional. However, it has been shown that patients are not satisfied with this method of communication (Green et al., 2007). Another barrier to secondary prevention is some patients have insufficient knowledge needed to manage risk factors and modify their lifestyles (Ellis et al., 2013). According to Sit et al. (2007), patients are often passively involved in their stroke education. In order to improve patients' knowledge to prevent secondary strokes, patients need to be more actively involved to promote learning and positive health changes (Ellis et al., 2013).

Hospitalization and stroke rehabilitation can be very stressful and overwhelming for patients (Allison, Evans, Kilbride, & Campbell 2008). Thus, other barriers to secondary prevention include stress and vulnerability. According to Allison et al. (2008),

it is important to repeat and review critical information regarding secondary prevention and follow-up with patients after discharge to ensure information was communicated clearly. Furthermore, Allison et al. (2008) stated when educating patients, information should be presented individually and tailored to the needs of each patient.

Some believe that older adults are not able to make lifestyle changes at their age and have challenges maintaining lifestyle changes (Allison et al., 2008). According to Allison et al. (2008), it is critical for healthcare professionals to discuss the benefits of managing risk factors and modifying lifestyles with older adults to reassure them change is possible and beneficial. In addition to age and perceptions of change, socioeconomic status, race, ethnicity, and access to healthcare services can be barriers to secondary stroke prevention (Goldfinger et al., 2012). According to Goldfinger et al. (2012), "Of the 582 survivors of stroke and TIA enrolled thus far, 81% are Black or Latino and 56% have an annual income less than $15,000. Many (33%) do not have blood pressures in the target range, and most (66%) do not have control of all three major stroke risk factors" (p. 1065). This study, as well as other ongoing studies, will aid in identifying other barriers to secondary stroke prevention in order to reduce the impact these barriers have on patients' ability to manage risk factors and modify their lifestyles, which are necessary to prevent recurrent strokes.

Summary

Due to the significant impact of a stroke on a person's life, prevention is of utmost importance. Furthermore, as a recurrent stroke can have a more significant impact on an individual's life (National Stroke Association, 2017), there is a need to prevent the recurrence of strokes through secondary prevention. Secondary stroke prevention can

help to reduce the rate of stroke recurrence, which in turn reduces healthcare costs. Within the literature, there was some evidence of different approaches to providing secondary stroke prevention interventions. One common theme found among the literature focused on self-management interventions used to help increase individuals' ability to manage their health condition. Within the literature, there were secondary prevention interventions provided by other healthcare professionals; however, there was scarce information about occupational therapy's role in secondary stroke prevention, and there was evidence that occupational therapists are not addressing prevention with clients in a rehabilitation setting on a consistent basis (Schmid et al., 2008). These findings provide support for the creation of a community-based secondary stroke prevention intervention led by occupational therapists.

Model

In order to develop a secondary stroke prevention program that is unique to occupational therapy, an occupational therapy model was used. The model chosen as the theoretical basis for this product is the Model of Human Occupation (MOHO). The Model of Human Occupation was used to design the *Secondary Stroke Prevention and Support: An Occupational Therapy Program* for individuals who have experienced a stroke and are at-risk for future stroke events. Due to the scarcity of literature on occupational therapy's involvement in secondary stroke prevention, there was no evidence supporting a specific occupational therapy model. The authors chose the Model of Human Occupation because the aim of the model relates well to the objective of the Program (Kielhofner, 2008; Turpin & Iwama, 2011). The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide

education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke and improve quality of life. The aim of MOHO is to foster occupational identity and occupational competence to achieve occupational adaptation through examination of occupation from the perspective of the model's key components: volition, habituation, performance capacity, and the environment (Kielhofner, 2008; Turpin & Iwama, 2011).

In MOHO, the human is composed of three interconnected parts: volition, habituation, and performance capacity (Kielhofner, 2008; Turpin & Iwama, 2011). The three components of the person interact with the environment to influence occupational participation (Kielhofner, 2008; Turpin & Iwama, 2011). The Program aims to make changes to a person's volition, habituation, and performance capacity through education and practice of self-management techniques to establish healthy habits and routines. Repetitive and novel experiences in a supportive environment promote lifestyle change and engagement in meaningful occupations (Kielhofner, 2008).

Chapter III contains the activities and methodology used to create the product. The overview of the product is presented in Chapter IV with the entirety of the product located in the Appendix. A summary of the product, including recommendations and limitations, is located in Chapter V.

CHAPTER III

Methodology

A thorough literature review was conducted to explore existing primary and secondary stroke prevention interventions, as well as information related to stroke and risk factors for stroke. Through the review of literature, there was a lack of evidence found for occupational therapy-led secondary stroke prevention services. In addition, we discovered qualities needed to implement in order to develop an effective secondary stroke prevention program. As a result of the literature review, a secondary stroke prevention program to be delivered by occupational therapists in the community to individuals who have experienced a stroke was designed.

A stroke, or cerebrovascular accident, occurs when there is an interruption of the blood supply to the brain, which results in cellular death, as the cells do not receive necessary oxygen (Bartels, Duffy, & Beland, 2016). A stroke can occur anywhere in the brain, and the severity of these events varies. Due to this, there are various effects of a stroke on an individual including physical, cognitive, and psychosocial (Centers for Disease Control and Prevention [CDC], 2017; Damush et al., 2011; Woodson, 2014). There is a high prevalence of strokes occurring within the United States, and approximately one-fourth of strokes are recurrent (CDC, 2017). The prevalence of stroke recurrence was the primary reason we created the *Secondary Stroke Prevention and Support: An Occupational Therapy Program***.** Through a review of research, we discovered that a notable percentage of strokes are recurrent, and these events can be

more debilitating (Kim et al., 2015; National Stroke Association, 2017). Thus, we aimed to learn more about ways to reduce recurrent strokes. Prevention is an underutilized practice area in occupational therapy, and there is a need for development of prevention interventions. We wanted to develop a program to assist a population occupational therapists are familiar with, those who have experienced a stroke. However, we did not just want to develop a program for rehabilitation, but we aimed to expand the role of occupational therapy through development of a program to prevent secondary strokes from occurring in this at-risk population.

In order to determine the need for the product, we conducted a review of the literature to evaluate the need for this type of intervention. The purpose of the literature review was to identify:

1. General stroke information
2. Modifiable risk factors for stroke
3. Current primary and secondary stroke prevention programs
4. Occupational therapy's role in stroke prevention currently
5. Factors to consider when developing a stroke prevention program
6. Best practice for secondary stroke prevention interventions

In order to gather data, a variety of databases were searched. Databases and search engines used included: PubMed, CINAHL, OT Search, American Journal of Occupational Therapy, and PsycInfo. We also used Google to search for additional relevant information for this product development. Keywords and MeSH terms were used to locate desired information. The terms used included: "secondary prevention", "education", "stroke", "occupational therapy methods", "physical therapy methods",

"stroke rehabilitation", "occupational therapy", and "activities of daily living". This list is not exhaustive, and these terms were often strung together for MeSH searches in databases such as PubMed. We reviewed titles and abstracts of multiple articles to determine relevance to product development and selected articles were critically reviewed. Data from these articles was sorted into categories to determine an outline of the literature review. Categories included: 'stroke information', 'current stroke prevention', and 'role of occupational therapy'. Subsequent searches were conducted to gather information in categories that lacked sufficient data. The category titles guided development of the headings for the literature review, and subheadings were developed as needed. Information gathered through this process provided direction for the creation of *Secondary Stroke Prevention and Support: An Occupational Therapy Program*.

Through the literature review, we found insufficient information about occupational therapy's role in secondary stroke prevention. There was no evidence found for an occupational therapy specific prevention program. One study examined the rate of implementation of prevention interventions in a rehabilitation context by occupational and physical therapists and it was found that occupational therapists did not sufficiently provide this type of intervention, reportedly due to a belief of some occupational therapists that prevention is not occupational therapists' role (Schmid et al., 2008). There was evidence found for secondary prevention programs provided by other healthcare disciplines, and occupational therapy was part of an interdisciplinary team in one pilot study (Kitchens et al., 2016). The interventions for secondary stroke prevention within the literature were diverse in regards to the structure and administration of the programs. One common theme found among literature was use of self-management techniques

(Lorig et al., 2012; Sit el al., 2007). Additionally, the focus of most secondary stroke prevention interventions is to provide knowledge, change behavior, and increase motivation.

The *Secondary Stroke Prevention and Support: An Occupational Therapy Program* was designed based on the existing research and qualities of established stroke prevention programs that were effective. Schmid et al. (2008) found evidence that prevention interventions are not adequate in a rehabilitation context, which led us to develop a community-based group intervention. The Program contains eight sessions and extends over a period of four months based on recommendations from Deijle et al. (2017) and Green et al. (2007). Deijle et al. (2017) found that there was a significant effect of the treatment intervention when the duration of the interventions lasted at least four months. Cole's 7 Steps group design was utilized to create the group sessions (Cole, 2012). Sakakibara et al. (2017) indicated the program should be inclusive of all modifiable risk factors associated with stroke for best success, therefore the Program provides comprehensive risk factor coverage with each session focused on a different risk factor. Education and practice of self-management skills are incorporated, and information is provided through verbal and written means of communication (Gustafsson et al., 2010; Lorig et al., 2012; Sit el al., 2007). In addition, the Program was designed to be led by occupational therapists due to their knowledge of roles, habits, and routines associated with occupational engagement.

Deijle et al. (2017) recommended using a model for the basis of program development. We chose the Model of Human Occupation (MOHO) to serve as the foundation of the Program based on the commonalities of the components of the model

and qualities of the Program. The three human components of MOHO are volition, habituation, and performance capacity (Kielhofner, 2008; Turpin & Iwama, 2011). The focus of this secondary stroke prevention program is to reduce the recurrence of stroke through modification of behaviors to promote healthy habits and routines, which relates to the habituation component of MOHO (Kielhofner, 2008; Turpin & Iwama, 2011). A second component is volition, and this is addressed through incorporating patient values and interests in the Program, as well as through increasing personal causation through use of self-management techniques (Kielhofner, 2008; Turpin & Iwama, 2011). Additionally, a goal of the Program is to increase an individual's performance capacity for a healthier lifestyle (Kielhofner, 2008; Turpin & Iwama, 2011). Through addressing these components, this program will promote occupational adaptation of the individuals to help manage their health (Kielhofner, 2008).

Secondary Stroke Prevention and Support: An Occupational Therapy Program Overview

The *Secondary Stroke Prevention and Support: An Occupational Therapy Program* includes a facilitator's guide and resources for participants. The Flesch-Kincaid Scale was used to support the readability of supplemental materials (Bastable, 2011). The Program consists of eight sessions that expands over sixteen weeks. The recommended tools to measure outcomes include: Stroke Specific Quality of Life Scale (SS-QOL) and the Occupational Questionnaire (Canadian Partnership for Stroke Recovery, 2018; University of Illinois Board of Trustees, 2018). An overview of the product is found in Chapter IV and the product in its entirety is in the Appendix.

The purpose of this program is to help prevent future strokes in participants through support and educational experiences. It is anticipated that implementation of this program will reduce the risk of recurrent stroke as well as improve overall occupational functioning, occupational adaptation, and quality of life.

CHAPTER IV

Product

The purpose of this scholarly project was to develop a facilitator's guide for an occupational therapy program to promote health and prevent recurrent strokes in the at-risk population of individuals who have experienced a stroke. The Program objective is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

The *Secondary Stroke Prevention and Support: An Occupational Therapy Program* was developed following a review of literature, which highlighted a lack of occupational therapy research for secondary stroke prevention interventions. We developed a group protocol using Cole's 7 steps to guide the creation of the group sessions (Cole, 2012). Within the product, there is a facilitator's guide with supplemental materials including participant handouts for each of the eight sessions. The participant handouts are provided to support comprehension of material for participants. The product is organized sequentially, with the group protocol first followed by each session's facilitator's guide and supplemental materials. The session topics include: (1) Stroke Prevention Introduction, (2) Self-Management, (3) Managing Health During Recovery Process, (4) Stress Management, (5) Habits for Healthy Eating, (6) Physical Activity Routines, (7) Alcohol and Tobacco: Choosing Healthier Habits, and (8) Stroke Prevention Conclusion/Wrap-Up. Sessions were designed to help individuals gain knowledge and

skills to manage their health and develop healthy habits and routines in a supportive environment.

The Program was created using the Model of Human Occupation (MOHO) as a guide. The purpose of using MOHO was to enable individuals to make changes to their volition, habituation and performance capacity through educational experiences and guided practice of self-management skills to promote establishment of healthy habits and routines to support occupational identity and occupational competence (Kielhofner, 2008; Turpin & Iwama, 2011). This product was designed to be implemented as a community-based secondary stroke prevention program. The information in this program could also be used to assist occupational therapists who work with the population of individuals who have experienced a stroke to provide prevention interventions in rehabilitation practice contexts. The product is located in the Appendix.

CHAPTER V

Summary

The purpose of this scholarly project was to develop a guide for occupational therapists to use when working with individuals who have experienced a stroke to prevent recurrent strokes. The product consists of an eight-session occupational therapy program with a facilitator's guide and supplemental materials, such as participant handouts. Sessions are designed to promote healthy habits and routines, increase quality of life, and have a positive impact on lifestyle for those who take part in this program. This product was developed to meet the need for occupational therapists' involvement in secondary stroke prevention interventions. Roughly one-fourth of the 800,000 people who experience a stroke have had a stroke in the past (Centers for Disease Control and Prevention [CDC], 2017). More than three-quarters of all strokes that occur could be prevented through lifestyle changes (CDC, 2017). In order to develop a secondary stroke prevention program, a review of literature was completed to identify information about stroke and stroke risk factors, and current primary and secondary stroke prevention programs. In addition, the effectiveness of programs, and occupational therapy's involvement in these programs, as well as components to consider when designing stroke prevention programs to support best practice was identified. Within the literature, there was little evidence of occupational therapy's involvement in secondary stroke prevention interventions. Based on this and other findings from the literature review, the *Secondary Stroke Prevention and Support: An Occupational Therapy Program* was developed. The

Model of Human of Occupation (MOHO) and Cole's 7 Steps were used to develop this protocol and guide the creation of the group sessions (Cole, 2012; Kielhofner, 2008). Other considerations taken when developing this product were health literacy rates in the United States, which was addressed through the use of the Flesch-Kincaid Scale to improve the readability of supplemental materials, such as the client handouts and activity instructions, to support comprehension of the material (Bastable, 2011). The sessions focused on addressing the modifiable risk factors for stroke by providing education on self-management. The Stroke Specific Quality of Life Scale (SS-QOL) and the Occupational Questionnaire were outcome measures chosen as recommendations to measure the effectiveness of this Program (Canadian Partnership Stroke Recovery, 2018; University of Illinois Board of Trustees, 2018).

Limitations

The following limitations for this program were identified:

- The Program was designed to be a unique occupational therapy-led secondary stroke prevention program and did not include other disciplines. The depth of content could be expanded with inclusion of other disciplines (for example, a dietician could provide more detailed content related to dietary needs).
- There is limited research regarding occupational therapy's involvement in secondary stroke prevention. Thus, an occupational therapy-specific framework for development of this program was not available.
- Using one assessment to measure readability may not have been adequate to meet literacy needs as there are varying literacy levels in the community and

additionally, stroke may impact cognition which may further affect participants' ability to understand materials.

Recommendations

The following recommendations for implementation of this Program were identified:

- Large deviations from the facilitator's guide should be avoided.
- Consult with other health professionals regarding topics of their expertise to expand information provided.
- Develop partnerships with other providers to implement in a community-based setting.
- Explore grant funding sources to implement this Program.

The following recommendations for future action, development and research were identified:

- Complete a pilot study of the Program and modify based on feedback.
- Expand program to include other health professionals to promote an interdisciplinary program.
- Develop a follow-up secondary stroke prevention program to build knowledge and skills and incorporate more occupation-based activities.
- Research the effectiveness of this program on reducing stroke recurrence, promoting changes in quality of life and increasing engagement in health management and maintenance behaviors.

Conclusion

Due to the substantial number of strokes that could be prevented through modifications to lifestyle habits, occupational therapists have the opportunity to provide

preventative interventions to positively impact individuals at-risk for having a stroke. The *Secondary Stroke Prevention and Support: An Occupational Therapy Program* was designed to support occupational therapy's involvement in secondary stroke prevention, and to further expand the role of occupational therapy in prevention and health promotion. The facilitator's guide should be used when implementing this program in a community-based setting. Occupational therapists are well-equipped to implement this Program due to their knowledge and experience in stroke rehabilitation, as well as knowledge regarding habits and routines, and the importance of engagement in occupation (American Occupational Therapy Association [AOTA], 2014). Lastly, this program can be used to increase occupational therapy's involvement in prevention and health promotion; however, due to the lack of existing literature regarding occupational therapy and secondary stroke prevention, there is a need for further research to be conducted.

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APPENDIX

Secondary Stroke Prevention and Support: An Occupational Therapy Program

Authors: Kaitlyn Bosch, MOTS, & Jamie St. Germain, MOTS

Group Population: The population we are addressing is individuals in the community who have experienced a stroke and are at-risk for recurrent strokes. A stroke, or cerebrovascular accident (CVA), can lead to a variety of occupational functioning deficits including physical, cognitive, and psychosocial problems (Centers for Disease Control and Prevention [CDC], 2017b; Damush et al., 2011; Woodson, 2014). The type, severity, and location of the stroke determines the level of impact on functioning (Woodson, 2014), and recurrent strokes are linked to more severe deficits in functioning (National Stroke Association, 2017b). Approximately one-fourth of individuals who have a stroke will experience a recurrent stroke (CDC, 2017b). The number of individuals who are at-risk for recurrent strokes is significant, but there is evidence that the majority (80%) of strokes could be prevented by addressing modifiable risk factors through lifestyle changes and managing health conditions (CDC, 2017b).

Model: Model of Human Occupation

Description/Rationale: The Model of Human Occupation (MOHO) was chosen due to its connection to the overall objective of our program (Kielhofner, 2008; Turpin & Iwama, 2011). The overarching objective of the Program is to provide support for individuals post-stroke, as well as provide education and skill development to promote engagement in the occupation of health management and maintenance to prevent stroke recurrence, and improve overall quality of life. Core concepts of MOHO include three interconnected parts of a person: volition, habituation, and performance capacity (Kielhofner, 2008; Turpin & Iwama, 2011). These person concepts also interact with the environment, which impacts engagement in occupations (Kielhofner, 2008; Turpin & Iwama, 2011). Our program focuses on enabling individuals to make changes to their volition, habituation and performance capacity through educational experiences and practicing self-management techniques to help establish healthy habits and routines in their lives. Throughout the Program, individuals are given the opportunity to engage in novel experiences and practice various skills in a structured environment that is supportive of promoting lifestyle changes and participation in daily occupations that individuals find meaningful (Kielhofner, 2008). This program will facilitate the components of occupational adaptation, occupational identity, and occupational competence, as individuals gain the skills needed to be self-managers of their health.

Purpose of Protocol: The purpose of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life. The group sessions will engage participants in self-management activities, group discussions, and participants will develop goals related to lifestyle habits. In addition, the group sessions will provide individuals with

education and support and will give them the opportunity to work with their support systems during the stroke recovery process.

Group Membership and Size: This program is designed for a group of community-dwelling individuals, aged 18 and older, who have experienced a stroke, as well as their family members, or other supports (e.g. friends). The role of the support persons in this group is to provide the participants who have experienced a stroke with assistance and support, as well as to share in the group as desired. The group is designed for approximately 6-8 individuals who have experienced a stroke, and their support person(s). This is an appropriate size for this population of community-dwelling individuals to optimize effectiveness (Cole, 2012). This group is a closed group. It is important for this group to be a closed group to create a sense of belonging within the group as well as to enhance behavioral change as evidence suggests multiple sessions are needed to achieve change (Cole, 2012; Deijle et al., 2017).

Program Objective: The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

Rationale: Prevention is within the scope of practice of occupational therapy (American Occupational Therapy Association [AOTA], 2014), yet there is evidence indicating that occupational therapists are not routinely implementing prevention and health promotion techniques in interventions with individuals post-stroke (Schmid, Butterbaugh, Egolf, Richards, & Williams, 2008). The goal of this program is to increase engagement in the occupation of health management and maintenance to reduce the risk of recurrent stroke and increase occupational identity and occupational competence as a self-manager of one's health.

Through reviewing literature, three key components to secondary stroke prevention interventions were identified as knowledge, behavior, and motivation. The objective of this secondary stroke prevention program incorporated these components. Having different types of support has been shown to increase motivation (Kim, Thrift, Nelson, Bladin, & Cadilhac, 2015; Lawrence, Pringle, Kerr, & Booth, 2016). The importance of collaborating with healthcare providers is embedded in Session 3 of the Program, as healthcare team members are a form of healthy support for individuals post-stroke (Lawrence et al., 2016). Family members, friends, and other supports are also encouraged to attend the group sessions, as multiple supports are beneficial, and can be useful in transferring information that has been learned in the Program to everyday life (Kim et al., 2015).

Knowledge is the foundation needed to make a change, and thus this program provides education to participants throughout the Program, with Session 1 being heavily focused on providing education about stroke to lay the groundwork for the following sessions which focus on using information to make change (Ellis, Barley, & Grubaugh,

2013). This program provides skills to make changes to behaviors that increase the risk of stroke and it inclusive of all lifestyle-related risk factors, with different sessions focusing on different risk factors. (Deijle et al., 2017; Sakakibara, Kim, & Eng, 2017). Each of these sessions focuses on the occupation of health management and maintenance. As the foundation of our program is based on the Model of Human Occupation, group members are educated on health management and maintenance skills to enhance occupational participation and support occupational adaptation (Kielhofner, 2008).

Session Outlines

- **Session 1: Stroke Prevention Introduction**
- Objectives
    - At the end of the session, participants will recall general information related to risk factors and implications of stroke.
    - At the end of the session, participants will analyze how changes in their performance capacity affected their ability to engage in various activities/roles following a stroke.
    - At the end of the session, participants will recognize the value of secondary stroke prevention. (volition)
    - Group members are educated on general information about stroke and how a stroke impacts function. Group members engage in an activity to identify how a stroke impacted their ability to engage in various activities/roles. The session provides group members social support and is designed to increase group members' sense of belonging and increase volition for secondary stroke prevention (Kielhofner, 2008).
- **Session 2: Self-Management**
- Objectives
    - At the end of the session, participants will explain self-management as it relates to stroke prevention.
    - At the end of the session, participants will identify an increase in personal causation to utilize self-management tools to perform the occupation of health management and maintenance.
    - At the end of the session, participants will practice writing a self-management goal to support engagement in health management and maintenance. (performance capacity)
- Group members are educated on self-management and are provided information on how to set SMART goals to support healthy behaviors and habits. Group members engage in an activity to practice setting a SMART goal. The practice of goal-setting is to support an increase in performance capacity and personal causation in regards to self-management techniques (Kielhofner, 2008).
- **Session 3: Managing Health During Recovery Process**
- Objectives

    - At the end of the session, participants will describe their understanding of the stroke recovery process.
    - At the end of the session, participants will recognize how to collaborate with different members of the healthcare team.
    - At the end of the session, participants will demonstrate increased competence of managing medication routines to support participation in the occupation of health management and maintenance. (habituation)
- Group members are educated on the stroke recovery process, coordinating with healthcare providers, and establishing medication routines. Group members have the opportunity to engage in an activity that allows them to practice organizing their medications in a supported environment, and are given information on how to use memory aids to promote their ability to manage their medications. The medication management activity focuses on the components of habituation, personal causation, and performance capacity as group members are able to show competency in setting up medication routines to increase their participation in the occupation of health management and maintenance (Kielhofner, 2008).
- **Session 4: Stress Management**
- Objectives
    - At the end of the session, participants will explain their understanding of the impact of stress on health.
    - At the end of the session, participants will identify two relaxation techniques to manage stress during the recovery process.
    - At the end of the session, participants will demonstrate competence in two relaxation techniques to be utilized as coping skills to promote health management and maintenance. (performance capacity)
- Group members are educated on coping skills to support their ability to manage stress throughout the stroke recovery process and life in general. Group members engage in an activity that allows them to practice two relaxation exercises that can be utilized to manage stress. The activity focuses on improving performance capacity through increasing participants' competence in the use of relaxation strategies to cope with stress (Kielhofner, 2008). The use of a visualization exercise specifically targets the person component of volition, as group members are able to personalize the exercise (Kielhofner, 2008).
- **Session 5: Habits for Healthy Eating**
- Objectives
    - At the end of the session, participants will give two examples of the benefits of healthy eating habits.
    - At the end of the session, participants will modify a recipe to support incorporation of healthy eating habits into daily routines to support health management and maintenance. (performance capacity and habituation)

    - At the end of the session, participants will identify an increase in personal causation to plan healthy meals to manage health.
- Group members are educated on healthy eating habits. Group members engage in a meal planning activity that allows them to modify an existing recipe they use to make it healthier to support incorporation of healthy habits into existing meal planning routines. The activity addresses the component of volition, as group members are able to choose a recipe to modify (Kielhofner, 2008). This activity also addresses performance capacity and personal causation through the ability to successfully practice applying information learned about healthy eating (Kielhofner, 2008).
- **Session 6: Physical Activity Routines**
    - At the end of the session, participants will identify physical activities and benefits related to health.
    - At the end of the session, participants will develop a movement schedule to support incorporation of regular physical activity into daily routines to support health management and maintenance. (habituation and performance capacity)
    - At the end of the session, participants will identify a change in personal causation to develop physical activity routines to manage health.
- Group members are educated on establishing physical activity routines. Group members engage in a movement schedule activity, where participants plan activities to engage in over a two-week period. The activity addresses the components of personal causation, performance capacity, and volition through the use of an activity that allows individuals to choose activities they want to make part of their routines (Kielhofner, 2008).
- **Session 7: Alcohol and Tobacco: Choosing Healthier Habits**
    - At the end of the session, participants will recognize the impact of alcohol and tobacco use on health and function.
    - At the end of the session, participants will identify healthy activities that support health management and maintenance.
    - At the end of the session, participants will compose a list of at least three healthy activities to support healthy habits. (habituation)
- Group members are educated on health impacts of smoking and using alcohol and tobacco. Group members engage in an interactive activity to identify healthy activities to replace unhealthy habits and to help cope with stress. The activity addresses the components of volition and habituation as individuals explore various healthy activities that they find meaningful and which can be incorporated into daily life. The activity also addresses personal causation and performance capacity (Kielhofner, 2008).
- **Session 8: Stroke Prevention Conclusion/Wrap-up**

    - At the end of the session, participants will compare changes in volition and personal causation in regards to health management and maintenance throughout the Program.
    - At the end of the session, participants will explain plans on how to continue to utilize self-management techniques in daily routines after the Program to prevent stroke recurrence. (habituation)
    - At the end of the session, participants will describe the most significant self-management technique they learned from engagement in the Program.
- Group members engage in a guided, reflective activity. Group members discuss how the group sessions impacted their engagement in the occupation of health management and maintenance. The activity gives the group members the opportunity to reflect on changes in volition, habituation, and performance capacity throughout their engagement in the Program (Kielhofner, 2008).

Outcome Criteria: The assessments recommended for use to measure the effectiveness of the Program in achieving the stated objective includes the Occupational Questionnaire and the Stroke Specific Quality of Life Scale. The Occupational Questionnaire is a MOHO self-report measure that allow individuals to record the occupations they participate in each half hour of a routine day (University of Illinois Board of Trustees, 2018). The Occupational Questionnaire also addresses individuals' perceived competence, value, and interest in these occupations (University of Illinois Board of Trustees, 2018). The Occupational Questionnaire should be utilized during the first session, fourth session, and the eighth and final session. One aspect of the overall objective of the Program is to increase participants' engagement in the occupation of health management and maintenance and this measure will allow participants to see changes in their habits and routines that support engagement in healthy and meaningful occupations. This assessment can be accessed from the MOHO Web at https://www.moho.uic.edu/productDetails.aspx?aid=41

The second assessment recommended for use is the Stroke Specific Quality of Life Scale (SS-QOL). The purpose of this self-report is to determine health-related quality of life for individuals who have experienced a stroke (Canadian Partnership for Stroke Recovery, 2018). Quality of life components addressed include upper extremity function, mood, self-care, social roles, and various other components (Canadian Partnership for Stroke Recovery, 2018). This outcome measure should be given at the first and last session of the Program in order to identify changes in quality of life that occurred through participation in the Program. This assessment can be accessed at http://www.strokengine.ca/wp-content/uploads/2015/01/Stroke-Specific-Quality-of-Life-Scale.pdf

Another aspect of the Program objective is to reduce the risk of recurrent strokes in participants. This component of the objective is not explicitly addressed through a recommended outcome measure; however, through participation in this program, and

through increased participation in health management and maintenance to change behaviors that increase the risk of stroke, stroke risk is reduced.

Time and Place of Meeting: Each group session will be 90 minutes, and will take place every two weeks. The meeting place of the group is flexible, as it can take place within various locations in the community.

Supplies: (See individual sessions)

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Secondary Stroke Prevention and Support: An Occupational Therapy Program Facilitator's Guide

Program Objective: The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

Session Objectives:

- At the end of the session, participants will recall general information related to risk factors and implications of stroke.
- At the end of the session, participants will analyze how changes in their performance capacity affected their ability to engage in various activities/roles following a stroke.
- At the end of the session, participants will recognize the value of secondary stroke prevention. (volition)

SESSION 1: Stroke Prevention Introduction

Group Membership: A group of community dwelling individuals who have experienced a stroke, as well as their family members, or other supports (e.g. friends).

Session Structure:

<u>Introduction</u>

- Welcome group and identify the objective of the *Secondary Stroke Prevention and Support: An Occupational Therapy Program.*
- Group facilitator(s) share personal experience with stroke population.
- Ice breaker activity: Have group members introduce themselves, state their expectations for the Program, and share a favorite leisure activity.
- Warm-up: Have group members complete stroke pre-assessment individually or with assistance if necessary.
- Expectations of the group:
    - Be respectful of others and their personal experiences/challenges
    - Be actively engaged in the group process
    - We encourage you to ask questions and engage in discussion
- Objectives:
    - At the end of the session, participants will recall general information related to risk factors and implications of stroke.
    - At the end of the session, participants will analyze how changes in their performance capacity affected their ability to engage in various activities/roles following a stroke.

    - At the end of the session, participants will recognize the value of secondary stroke prevention. (volition)
- Brief outline: In today's group we will be educating you on some general information about stroke and we will be discussing the impact of stroke as an introduction to stroke prevention.

Content

General Information

What is a stroke?

- Sometimes referred to as a "Brain attack"
- A stroke is when there is not enough blood being carried to a part of the brain
- A lack of blood flow results in lack of oxygen to brain tissue
- A lack of oxygen can lead to death of cells in the brain
- A stroke can lead to disability, brain damage, and even death (CDC, 2017b)

Stroke Incidence

- 2,160 people have a stroke in the United States every day.
- Almost 800,000 strokes occur every year in the U.S.
- 25% of people who have a stroke have had a stroke before (CDC, 2017b).

Warning Signs of a Stroke

Signs of Stroke (For individuals who have experienced a stroke)

- "Sudden numbness or weakness in the face, arm, or leg, especially on one side of the body
- Sudden confusion, trouble speaking, or difficulty understanding speech
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance, or lack of coordination
- Sudden severe headache with no known cause" (CDC, 2017b, para. 3)

FAST (For family members, healthy supports, and general population)
"Face: Ask the person to smile. Does one side of the face droop?
Arms: Ask the person to raise both arms. Does one arm drift downward?
Speech: Ask the person to repeat a simple phrase. Is there speech slurred or strange?
Time: If you observe any of these signs, call 9-1-1 immediately" (CDC, 2017b, para. 6).

Implications of Stroke

- The type and severity of stroke is dependent upon what part of the brain was impacted (Woodson, 2014).
- Impacts include physical, cognitive and psychosocial (CDC, 2017b; Woodson, 2014).

Modifiable Risk Factors of Stroke

- Modifiable means that it can be changed

Health Conditions

- High blood pressure
- High cholesterol
- Heart disease
- Diabetes

Lifestyle Habits

- Poor diet
- Limited exercise
- Smoking/tobacco use
- Alcohol use (Bartels, Duffy, & Beland, 2016; CDC, 2017b).

Nearly 80% of strokes can be prevented with modification of these risk factors (CDC, 2017b)

<u>Activity</u>

Impact of Stroke on Occupational Functioning: Group members will engage in an activity to analyze how a stroke personally impacted their occupational functioning as well share common experiences with the group. A detailed description of the activity is attached.

<u>Sharing</u>

- Encourage group members to share the most difficult activities/tasks for them following their stroke.
- Encourage group members to share other activities that are difficult to engage in.
- Encourage participants and supporters to share their experience of the stroke symptoms they recognized.
- Have group members share what they learned from this session about stroke.

<u>Processing</u>

- How did you feel during the activity?

- How did you feel within the group environment (Was it easy or difficult to disclose challenges related to personal experiences regarding stroke)?
- How has your stroke affected your sense of competence in your ability to complete daily activities/roles?
- How do you feel the session has been helpful in learning about stroke?
- How have personal roles, if any, changed (within the family, workplace, etc.)?
- How do you feel about the value of this program to your life?
- What do you think about the value of secondary stroke prevention?

Generalizing

- Prompt group members to identify key points from the group session.
- Have group members identify why they believe prevention is important.

Application

- Have participants complete post-assessment and review answers.
- Encourage group members to share useful strategies to engage in challenging daily activities with other group members.
- Homework: Encourage group members to get a notebook, planner, or journal etc. to use for upcoming homework assignments throughout the Program.

Summary

- Review objectives and ask group members if they believe objectives have been met.
- Thank group members for their participation and introduce next week's topic (Self-Management).

Activity description: Group members will independently complete the activity checklist worksheet (attached) in order to analyze their ability to engage in various activities/roles that may have been challenging post-stroke. After each group member has independently completed the checklist worksheet, the group facilitator(s) will read the activity list aloud (see below). Group members are instructed to raise their hand if they are unable, or are having difficulty completing the named activity since having a stroke. Group facilitator(s) will then guide a discussion.

The purpose of this activity is to show the significant impact of stroke on occupational functioning to help demonstrate the value of secondary stroke prevention to motivate participants to do what they can to prevent another stroke from occurring. Additionally, this activity will allow participants to analyze their current performance capacity, as well as to demonstrate to group members that they are not alone in this process.

Supplies:

- Worksheet per participant
- Writing utensil per participant

Activity List

ADLs:

- Taking a shower or bath
- Getting dressed or undressed
- Getting in/out of bed
- Brushing hair
- Brushing teeth
- Shaving
- Using a fork, knife etc. to eat a meal
- Going to the bathroom

IADLs:

- Cooking well-balanced meals
- Taking care of children/pets
- Cleaning the house (laundry, vacuuming etc.)
- Paying bills
- Driving
- Taking out the trash
- Exercising
- Shopping
- Doing dishes

Social participation:

- Communicating with friends, family, and coworkers
- Using a cell phone

Work/School:

- Ability to work and complete job/education requirements

Leisure:

- Engage in meaningful activity (hobby)
- Golf, biking, bowling, and other physical activities
- Knitting, scrapbooking, board games, etc.

Pre-Assessment

What area of the body does a stroke impact?

a. The heart
b. The brain

How many people have a stroke every year in the United States?

a. 400,000
b. 600,000
c. 800,000
d. 1,000,000

True or False

Is having sudden trouble walking a sign of a stroke?

True False

Which of the following are risk factors for stroke? Circle all that apply.

High blood pressure
High cholesterol
Heart disease
Diabetes

Name three activities that were difficult for you to do after having a stroke.

_____

Post-Assessment

What area of the body does a stroke impact?

a. The heart
b. The brain

How many people have a stroke every year in the United States?

a. 400,000
b. 600,000
c. 800,000
d. 1,000,000

True or False

Is having sudden trouble walking a sign of a stroke?

True False

Which of the following are risk factors for stroke? Circle all that apply.

High blood pressure
High cholesterol
Heart disease
Diabetes

Name three activities that were difficult for you to do after having a stroke.

_____

Answer Key

What area of the body does a stroke impact?

a. The heart
b. The brain

How many people have a stroke every year in the United States?

a. 400,000
b. 600,000
c. 800,000
d. 1,000,000

True or False

Is having sudden trouble walking a sign of a stroke?

True False

Which of the following are risk factors for stroke? Circle all that apply.

High blood pressure
High cholesterol
Heart disease
Diabetes

The Activity Checklist

Directions: Read each activity/role, and put an "X" in the box that describes you.

Activity/Role:	**Cannot do**	**Need a lot of help**	**Need a little help**	**Can do**
Taking a shower/bath				
Getting dressed/undressed				
Getting in/out of bed				
Brushing hair				
Brushing teeth				
Shaving				
Using a fork, knife, etc. to eat a meal				
Going to the bathroom				
Cooking healthy meals				
Taking care of children/pets				
Cleaning the house				
Paying bills				
Driving				
Taking out the trash				
Talking to friends, family, coworkers, etc.				
Using a phone/cell phone				
Working/Going to school				
Exercising				
Shopping				
Doing dishes				
Doing a hobby				

Secondary Stroke Prevention and Support: An Occupational Therapy Program
Participant Handout

Program Goal: The goal of this program is to help support people after a stroke and give them information and skills to manage health and live a healthy lifestyle to reduce the risk of having a stroke.

Session Goals:

- At the end of the group, I will know more about strokes and things that put me at-risk to have a stroke.
- At the end of the session, I will know how changes in my abilities affected how I was able do many activities/roles following a stroke.
- At the end of the session, I will know more about the value of secondary stroke prevention.

SESSION 1: Stroke Prevention Introduction

What is a stroke?

- A “brain attack”.
- A stroke is when there is not enough blood going to a part of the brain.
- A lack of blood in the brain leads to a lack of oxygen in the brain.

- A lack of oxygen can lead to death of cells in the brain.
- A stroke can lead to disability, brain damage, and even death (CDC, 2017b).

How common are strokes?

- 2,160 people have a stroke in the United States (U.S.) every day.
- Almost 800,000 strokes occur every year in the U.S.
- One-quarter (25%) of people who have a stroke have had a stroke before (CDC, 2017b).

What are the signs of a stroke?

- "Sudden numbness or weakness in the face, arm, or leg, especially on one side of the body
- Sudden confusion, trouble speaking, or difficulty understanding speech

- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance, or lack of coordination
- Sudden severe headache with no known cause" (CDC, 2017b, para. 3).

FAST

"Face: Ask the person to smile. Does one side of the face droop?

Arms: Ask the person to raise both arms. Does one arm drift downward?

Speech: Ask the person to repeat a simple phrase. Is there speech slurred or strange?

Time: If you observe any of these signs, call 9-1-1 immediately" (CDC, 2017b, para. 6).

What happens after a stroke?

- A stroke can lead to changes in thoughts, emotions, and your body (CDC, 2017b; Woodson, 2014).

What puts me at-risk for a stroke?

- Modifiable risk factors (modifiable means that it can be changed)

Health Conditions

- High blood pressure
- High cholesterol
- Heart disease
- Diabetes

Lifestyle Habits

- Poor diet

- Not enough exercise
- Smoking/tobacco use
- Alcohol use (Bartels et al. 2016; CDC, 2017b).

Almost 80% of strokes can be prevented with changes of these risk factors (CDC, 2017b).

Homework: Get a notebook, planner, journal etc. before the next session to use for future homework throughout the Program.

References

Bartels, M. N., Duffy, C. A., & Beland, H. E. (2016). Pathophysiology, medical management, and acute rehabilitation of stroke survivors. In G. Gillen (Ed.) *Stroke rehabilitation: A function-based approach* (4th ed.) (pp. 2-45). St. Louis, MO: Elsevier.

Centers for Disease Control and Prevention. (2017b). *Stroke.* Retrieved from https://www.cdc.gov/stroke/index.htm

Woodson, A. M. (2014). Stroke. In M. V. Radomski & C. A. Trombly-Latham (Eds.), *Occupational therapy for physical dysfunction* (7th ed.) (pp. 999-1041). Baltimore, MD: Lippincott Williams & Wilkins.

Secondary Stroke Prevention and Support: An Occupational Therapy Program Facilitator's Guide

Program Objective: The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

Session Objectives:

- At the end of the session, participants will explain self-management as it relates to stroke prevention.
- At the end of the session, participants will identify an increase in personal causation to utilize self-management tools to perform the occupation of health management and maintenance.
- At the end of the session, participants will practice writing a self-management goal to support engagement in health management and maintenance. (performance capacity)

SESSION 2: Self-Management

Group Membership: A group of community dwelling individuals who have experienced a stroke, as well as their family members, or other supports (e.g. friends).

Session Structure:

<u>Introduction</u>

- Welcome group and review the objective of the *Secondary Stroke Prevention and Support: An Occupational Therapy Program*.
- Last session was our introductory session. To review, we provided information about stroke and risk factors for stroke as well as discussed the impact of a stroke on functioning in daily life. Ask group members if anyone has any questions, comments, or feedback before progressing with next topic. Have group members identify one thing that stood out to them from last session.
- Warm-up: Have group members complete self-management pre-assessment individually or with assistance if necessary.
- Expectations of the group:
    - Be respectful of others and their personal experiences/challenges
    - Be actively engaged in the group process
    - We encourage you to ask questions and engage in discussion
- Objectives:
    - At the end of the session, participants will explain self-management as it relates to stroke prevention.

    - At the end of the session, participants will identify an increase in personal causation to utilize self-management tools to perform the occupation of health management and maintenance.
    - At the end of the session, participants will practice writing a self-management goal to support engagement in health management and maintenance. (performance capacity)
- Brief outline: In today's group we will be providing you with information on self-management and how to set goals to support healthy behaviors and habits.

Content

General Information

What is self-management?

- Self-management is a strategy that can be used to cope with chronic conditions such as a stroke (Lorig et al., 2012).
    - Stroke is a chronic condition because recovery from stroke lasts a lifetime.
- Below are two definitions of self-management. Facilitator(s) can cater to the needs of the group participants by choosing an appropriate definition(s) to share.
- "Self-management refers to the individual's ability to manage the symptoms, treatment, physical and psychosocial consequences and lifestyle changes inherent in living with a chronic condition" (Barlow, Wright, Sheasby, Turner, & Hainsworth, 2002, p. 178).
- Self-management is the process of taking control of one's health and learning how to live after a stroke.
- This session is an introduction to self-management, and in the following sessions, individuals will practice being active self-managers of their health.

What is included in self-management?

- Coping with having a stroke
    - Learning about the condition
    - Developing new habits and routines
- Functioning in daily life
    - Learning different ways to complete meaningful tasks
- Coping with emotions
    - Handling stress
    - Using supports (Lorig et al., 2012).

Self-management can be used to help reduce the risk of a stroke by helping individuals make adaptations to lifestyle habits that increase a person's risk for stroke.

- Lifestyle Habits that increase the risk for stroke:
    - Poor diet
    - Limited exercise
    - Smoking/tobacco use
    - Alcohol use (Bartels et al., 2016; CDC, 2017b).

Tools for self-management:

- Problem-solving
    - These steps can be used to help individuals with occupational performance challenges to plan and set goals for self-management. Participants' problems may be related to lifestyle habits as well as problems with performing occupations due to the impact of the stroke. The problem-solving steps help individuals identify possible solutions to consider.
- Decision-making
    - Possible solutions to problems can be weighed using a pros and cons list. Pros and cons are weighted based on importance.
- Goal setting
    - Goal setting helps individuals identify what they want to do and how they are going to do it (Lorig et al., 2012).

SMART Goal-Setting

- SMART goal-setting will be used as a guide for group members to set self-management goals. Group members will have the opportunity to work towards and modify their goals in subsequent sessions.

S: Specific	M: Measurable	A: Attainable	R: Relevant	T: Timely
Explain the goal as much as you can	Include how you will know when you have achieved your goal; include numbers	Is my goal something I am capable of reaching?	Does this goal help me meet my needs/desires?	Set a deadline

(Massachusetts Institute of Technology, n.d.)

SMART Goal Example:

- I will go for a walk in my neighborhood, by myself, with a friend, or with a family member, for 20 minutes, 3 times per week, for 8 straight weeks, to support my need to be more physically active.

S: Specific	M: Measurable	A: Attainable	R: Relevant	T: Timely
Explain the goal as much as you can	Include how you will know when you have achieved your goal; include numbers	Is my goal something I am capable of reaching?	Does this goal help me meet my needs/desires?	Set a deadline

(Massachusetts Institute of Technology, n.d.)

SMART Goal Example:

- I will go for a walk in my neighborhood, by myself, with a friend, or with a family member, for 20 minutes, 3 times per week, for 8 straight weeks, to support my need to be more physically active.

Activity

Self-management: Group members will engage in an activity to practice using one tool of self-management: goal-setting. This activity will support group members in adopting healthy behaviors to improve health management and maintenance. A detailed description of the activity is attached.

Sharing

- Encourage group members to share their process during the activity.
- Encourage group members to share their SMART goal.
- Have group members share what they learned from this session about self-management.

Processing

- How did you feel during the self-management activity?
- What was the most difficult part of setting a SMART goal?
- How did you feel within the group environment (Was it easy or difficult to disclose your SMART goal and your thought process)?
- How do you feel the session has been helpful in learning about self-management?
- How did this activity affect your sense of competence in using self-management tools for health management and maintenance? (personal causation)

Generalizing

- Prompt group members to identify key points from the group session.
- Have group members describe why they believe self-management is important.

Application

- Have participants complete post-assessment and review answers.
- As you reflect on this process, what do you think the challenges might be in working toward your SMART goal?
- Inform participants that a helpful resource for self-management is:
  Lorig, K., Holman, H., Sobel, D., Laurent, D., Gonzalez, V., & Minor, M. (2012). *Living a healthy life with chronic conditions: Self-management of heart disease, arthritis, diabetes, depression, asthma, bronchitis, emphysema and other physical and mental health conditions.* Boulder, CO: Bull Publishing Company.
- Description: This book is a great resource for individuals to use to help learn to be self-manager of one's health while living with a chronic condition. This book may be a helpful resource for both facilitator(s) and the participants and their supports. Detailed steps for self-management are included in this book.
- Homework: Homework instructions are included on the participant handouts. Participants will write down the SMART goal they set during the session and will keep track of their progress toward this goal and will write about their progress in a journal/planner etc. before the next session. Participants are encouraged to write about their progress to help them stay accountable toward reaching the goals they set throughout the Program.

Summary

- Review objectives and ask group members if they believe objectives have been met.
- Thank group members for their participation and introduce next week's topic (Managing Health During Recovery Process). In order to prepare for next week, you are encouraged to bring a list of your prescribed medications with the instructions for when to take them (ex. Medication 1 take twice daily). If you do not wish to bring a list, you will still be able to participate in the activity, as a mock prescription will be provided.

Activity description: Group members will independently complete the goal-setting tool for self-management worksheet (attached) in order to increase performance capacity and personal causation in self-management techniques. The worksheet will guide group members through the steps of setting a SMART goal in order to develop a goal that is specific, measurable, attainable, relevant, and timely.

The purpose of this activity is to educate group participants on the components of self-management as well as provide them an opportunity to practice applying these components of self-management to their lives. This activity will increase participants'

volition and performance capacity to utilize self-management techniques to support occupational performance in health management and maintenance.

Supplies:

- Worksheet per participant
- Writing utensil per participant

Pre-Assessment

What is self-management?

_____

What are four lifestyle habits that increase a person's risk for stroke?

1.

2.

3.

4.

I am able to use self-management tools to support health and prevent future strokes.

1 2 3 4 5

1 Strongly disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree

Post-Assessment

What is self-management?

_____

What are four lifestyle habits that increase a person's risk for stroke?

1.

2.

3.

4.

I am able to use self-management tools to support health and prevent future strokes.

1 2 3 4 5

1 Strongly disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree

Answer Key

What is self-management? (answers may vary)

Self-management is the process of taking control of one's health and learning how to live after a stroke.

What are four lifestyle habits that increase a person's risk for stroke?

1. Poor diet
2. Limited exercise
3. Smoking/tobacco use
4. Alcohol use

SMART Goal-Setting

Directions: Write a SMART goal to help manage your health. Use the information below to help you.

S: Specific	M: Measurable	A: Attainable	R: Relevant	T: Timely
Explain the goal as much as you can	Put how you will know when you have finished your goal; include numbers	Ask yourself: Is my goal something I am capable of finishing?	Ask yourself: Does this goal help me meet my needs/wants?	Set a deadline

(Massachusetts Institute of Technology, n.d.)

Example:

Specific	I am going to walk in my neighborhood. Sometimes I want to walk by myself, sometimes I will walk with others.
Measurable	I am going to walk for 20 minutes, 3 times per week, for 8 straight weeks.
Attainable	I am able to walk in my neighborhood. This is something I can do.
Relevant	I want to improve my health by exercising more.
Timely	I am going to walk for eight weeks.

SMART goal: I will go for a walk in my neighborhood, by myself, with a friend, or with a family member, for 20 minutes, 3 times per week, for 8 straight weeks, to support my need to be more physically active.

My SMART goal:

Specific	
Measurable	
Attainable	
Relevant	
Timely	

SMART goal:

_____

_____

_____

_____

References

Massachusetts Institute of Technology. (n.d.). *Performance development: SMART goals*. Retrieved from http://hrweb.mit.edu/performance-development/goal-setting-developmental-planning/smart-goals

Secondary Stroke Prevention and Support: An Occupational Therapy Program
Participant Handout

Program Goal: The goal of this program is to help support people after a stroke and give them information and skills to manage health and live a healthy lifestyle to reduce the risk of having a stroke.

Session Goals:

- At the end of the session, I will know more about self-management and how to manage my health.
- At the end of the session, I will feel able to use self-management tools to manage my health.
- At the end of the session, I will be able to write a goal to manage my health.

SESSION 2: Self-Management

What is self-management?

- Self-management is a way to cope with chronic health conditions such as a stroke (Lorig et al., 2012).
    - Stroke is a chronic condition because recovery from stroke lasts a lifetime.

- Self-management is taking control of one's health and learning how to live after a stroke.
- Using self-management can reduce the risk of a stroke.

What is included in self-management?

- Coping with having a stroke
    - Learning about stroke
    - Making new habits and routines
- Doing activities in daily life
    - Learning different ways to complete meaningful activities
- Coping with emotions
    - Handling stress
    - Using supports (family, friends, healthcare providers)

(Lorig et al., 2012).

What puts me at-risk for a stroke?

- Lifestyle Habits that increase the risk for stroke:
    - Poor diet
    - Not enough exercise
    - Smoking/tobacco use
    - Alcohol use (Bartels et al., 2016; CDC, 2017b).

How do I manage my health?

Tools for self-management

- Problem-solving
    - The problem-solving steps help me identify possible ways to solve a problem I have.
- Decision-making
    - Possible ways to solve a problem can be looked at using a pros and cons list. Pros and cons are ranked based on importance.

- Goal setting
    - Goal setting helps me identify what I want to do and how I am going to do it (Lorig et al., 2012).

SMART Goal-Setting

S: Specific	M: Measurable	A: Attainable	R: Relevant	T: Timely
Explain the goal as much as you can	Include how you will know when you have achieved your goal; include numbers	Is my goal something I am capable of reaching?	Does this goal help me meet my needs/desires?	Set a deadline

(Massachusetts Institute of Technology, n.d.)

SMART Goal Example:

I will go for a walk in my neighborhood, by myself, with a friend, or with a family member, for 20 minutes, 3 times per week, for 8 straight weeks, to support my need to be more physically active.

Homework:

Self-Management SMART Goal:

_____

_____

_____

_____

Before the next session, keep track of your progress toward this goal (in a notebook, planner, journal etc.) and write about your progress.

References

Bartels, M. N., Duffy, C. A., & Beland, H. E. (2016). Pathophysiology, medical management, and acute rehabilitation of stroke survivors. In G. Gillen (Ed.) *Stroke rehabilitation: A function-based approach* (4th ed.) (pp. 2-45). St. Louis, MO: Elsevier.

Centers for Disease Control and Prevention. (2017b). *Stroke.* Retrieved from https://www.cdc.gov/stroke/index.htm

Lorig, K., Holman, H., Sobel, D., Laurent, D., Gonzalez, V., & Minor, M. (2012). *Living a healthy life with chronic conditions: Self-management of heart disease, arthritis, diabetes, depression, asthma, bronchitis, emphysema and other physical and mental health conditions.* Boulder, CO: Bull Publishing Company.

Massachusetts Institute of Technology. (n.d.). *Performance development: SMART goals*. Retrieved from http://hrweb.mit.edu/performance-development/goal-setting-developmental-planning/smart-goals

Secondary Stroke Prevention and Support: An Occupational Therapy Program Facilitator's Guide

Program Objective: The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

Session Objectives:

- At the end of the session, participants will describe their understanding of the stroke recovery process.
- At the end of the session, participants will recognize how to collaborate with different members of the healthcare team.
- At the end of the session, participants will demonstrate increased competence of managing medication routines to support participation in the occupation of health management and maintenance. (habituation)

SESSION 3: Managing Health During Recovery Process

Group Membership: A group of community dwelling individuals who have experienced a stroke, as well as their family members, or other supports (e.g. friends).

Session Structure:

Introduction

- Welcome group and review the objective of the *Secondary Stroke Prevention and Support: An Occupational Therapy Program*.
- Last session focused on self-management. To review, we provided information about self-management tools, as well as used SMART goal-setting to set self-management goals. Have group members share their thoughts and feelings about the homework from Session 2. Encourage group members to share the progress they made toward the SMART goal they set last session. Ask group members if anyone has any questions, comments, or feedback before progressing with next topic.
- Warm-up: Have group members complete pre-assessment individually or with assistance if necessary.
- Expectations of the group
    - Be respectful of others and their personal experiences/challenges
    - Be actively engaged in the group process
    - We encourage you to ask questions and engage in discussion
- Objectives:

    - At the end of the session, participants will describe their understanding of the stroke recovery process.
    - At the end of the session, participants will recognize how to collaborate with different members of the healthcare team.
    - At the end of the session, participants will demonstrate increased competence of managing medication routines to support participation in the occupation of health management and maintenance. (habituation)
- Brief outline: In today's group we will be providing you with information on managing your health during the recovery process by coordinating with healthcare providers and establishing medication routines.

Content

General Information

Recovery process

- Stroke recovery is a lifelong process.
- The stroke recovery process begins as soon as symptomology of a stroke occurs. Due to the high risk of complications following a stroke, it is important to start stroke rehabilitation as soon as possible to prevent complications such as contractures, seizures, and spasticity (Bartels, Duffy, & Beland, 2016).
- Recovery statistics:
    - "10% of stroke survivors recover almost completely
    - 25% recover with minor impairments
    - 40% experience moderate to severe impairments requiring special care
    - 10% require care in a nursing home or other long-term care facility
    - 15% die shortly after the stroke" (National Stroke Association, 2017a, para. 3).
- Recovery outcomes are not entirely predictable (National Stroke Association, 2017a)
    - Severity of the stroke depends on the location (Woodson, 2014)
    - The brain can react in different ways to heal after a stroke (National Stroke Association, 2017a)
    - The rate of recovery will decline over time (Woodson, 2014)

Recovery Team Members (Not all inclusive, and may vary)

- Physician (doctor): Leads the stroke recovery team. Well-equipped to answer a variety of questions regarding stroke, and the recovery process.
- Nurse: Helps individuals with medical management after a stroke.
- Occupational Therapist (OT): Assists individuals to re-engage in meaningful daily activities such as dressing, bathing, working, driving, hobbies, etc.
- Physical Therapists (PT): Assists individuals to regain strength, endurance, and balance needed for daily life after a stroke.

- Speech-Language Pathologists (SLP): Assists individuals to regain skills needed for communication after a stroke.
- Dietician: Addresses individuals with dietary needs and assists in development of healthy diet post-stroke.
- Other specialists: Physiatrist, Neurologist, Neuropsychologist, Social Worker, Recreational therapist, Case Manager, etc. (Bartels et al., 2016; National Stroke Association, 2017a)

Important Information

- In order to maximize recovery outcomes, it is important to attend all appointments, and be engaged as much as possible in your recovery.
- Ask questions, share concerns
- Listen to recommendations and follow through on them.
- Be open with your healthcare team.

Medication

- Another important aspect of stroke recovery is taking prescribed medications correctly.
- Developing a medication management routine is important.
- Memory aids can assist you in remembering to take medication. (pill boxes, phone alerts, sticky notes etc.)
- Ask your doctor specific questions regarding your medication

<u>Activity</u>

Medication Management: Group members will engage in a purposeful activity to practice setting up a medication management routine using memory aids to improve health management and maintenance. A detailed description of the activity is attached.

<u>Sharing</u>

- Encourage group members to share their process during the medication management activity.
- Encourage group members to share the location of where they would place their sticky-note memory aid to support their medication routine.
- Encourage group members to share what they learned from this session about the stroke recovery process.
- Encourage group members to share what they learned from this session about medication management.

<u>Processing</u>

- How did you feel during the medication management activity?

- How did you feel within the group environment (Was it easy or difficult to engage in the activity)?
- How do you feel the session has been helpful in learning about the stroke recovery process?
- How do you feel the session has been helpful in learning about medication management?
- How did this activity affect your sense of competence in establishing a medication routine for health management and maintenance? (personal causation)
- Which memory aids do you feel you will implement into your routines for medication management long-term?
- How do you feel using memory aids will help you to participate in health management and maintenance?

Generalizing

- Prompt group members to identify key points from the group session.
- Have group members identify why they believe having an understanding of the stroke recovery process is important, as well as why establishing a medication routine is important.

Application

- Have participants complete post-assessment and review answers.
- Have group members write a SMART goal related to stroke recovery (e.g. collaborating with healthcare providers, establishing a medication routine).
- Homework: Homework instructions are included on the participant handouts. Participants will write down the SMART goal they set during the session and will keep track of their progress toward this goal and the goals set in the previous session. Participants will write about their progress in a journal/planner etc. before the next session. Participants are encouraged to write about their progress to help them stay accountable toward reaching the goals they set throughout the Program. Participants can now assess progress they have made in the SMART goals they have set in Session 2 and Session 3.

Summary

- Review objectives and ask group members if they believe objectives have been met.
- Thank group members for their participation and introduce next week's topic (Stress Management).

Activity description: Group members will independently practice using memory aids to support the development of a medication management routine. The memory aids the participants will use include a 7-day pillbox organizer, a daily alarm on a cell phone, and

a sticky-note reminder. Participants will use a personal list of prescribed medications or will be given a mock prescription and a 7-day pillbox organizer, and will fill the pillbox according to the directions on the prescription using multicolor beads to represent prescribed medications. For example, if medication 1 is prescribed as “take once daily”, the participant would place one chosen colored bead into each day of the week to represent this prescription. Upon completion of filling a pillbox, participants will use their cell phones to set an alarm as a reminder to take the medication at the appropriate time. Additionally, participants will use sticky-notes to write themselves a reminder to take their medication, and determine where they would place these sticky-notes in their context. For example, if a participant takes their medication in the morning, they could put a sticky-note on the bathroom mirror to remind them when they brush their teeth. The purpose of these memory aids are to help group members integrate this new habit of taking prescribed medications into existing routines, or to help reinforce an established habit.
*Note to facilitator(s): If participants are unable to correctly setup medication routines, family members or other support persons may assist them with developing a medication routine to ensure safety.

The purpose of this activity is to provide participants practice of developing a medication routine for health management and maintenance in a supportive environment. This activity will address the components of habituation, personal causation, and performance capacity as individuals have the opportunity to demonstrate competence in the setup of a medication routine in order to improve participation in health management and maintenance.

Supplies:

- 7-Day Pillbox Organizer per participant (with four compartments per day)
- Cell phone per participant (participants will use their own cell phone)
- Sticky-notes and writing utensil per participant
- Mock prescription per participant (participants can bring personal prescription)
- Multicolor beads

Pre-Assessment

If you have a question about your prescribed medication, who would you ask for help?

a. Nurse
b. Physician
c. Occupational Therapist

What healthcare team member could help you with activities such as dressing, bathing, and driving?

a. Occupational Therapist
b. Physical Therapist
c. Nurse

Do you currently have a medication routine?

Yes No

What is a memory aid that can be used to help you with your medication routine? Circle all that apply.

a. 7-Day Pillbox Organizer
b. Sticky-notes
c. Cell phone

Post-Assessment

If you have a question about your prescribed medication, who would you ask for help?

a. Nurse
b. Physician
c. Occupational Therapist

What healthcare team member could help you with activities such as dressing, bathing, and driving?

a. Occupational Therapist
b. Physical Therapist
c. Nurse

Do you currently have a medication routine?

Yes No

What is a memory aid that can be used to help you with your medication routine? Circle all that apply.

a. 7-Day Pillbox Organizer
b. Sticky-notes
c. Cell phone

Answer Key

If you have a question about your prescribed medication, who would you ask for help?

a. Nurse
b. Physician
c. Occupational Therapist

What healthcare team member could help you with activities such as dressing, bathing, and driving?

a. Occupational Therapist
b. Physical Therapist
c. Nurse

What is a memory aid that can be used to help you with your medication routine? Circle all that apply.

a. 7-Day Pillbox Organizer
b. Sticky-notes
c. Cell phone

Mock Prescription for Participants

Directions: Use the information in the table to fill your pill-box organizer.

Medication	**Prescription information**
Medication 1	Take one tablet twice daily.
Medication 2	Take two tablets once daily. Take tablets 30 minutes before a meal.
Medication 3	Take 1 tablet as needed.

Mock Prescription for Facilitator(s) (Answer Key)

Directions: Use the information in the table to fill your pill-box organizer.

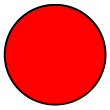
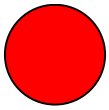
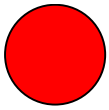
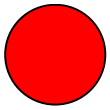
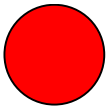
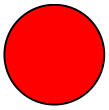
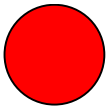
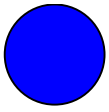
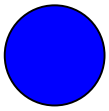
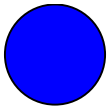
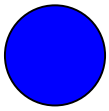
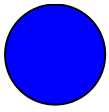
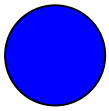
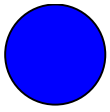
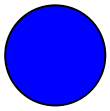
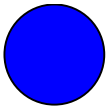
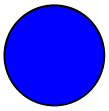
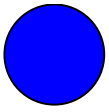
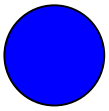
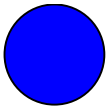
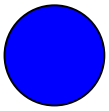
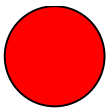
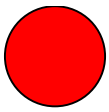
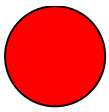
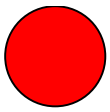
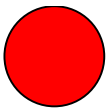
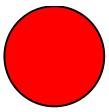
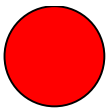
Medication	**Prescription information**
Medication 1	Take one tablet twice daily.
Medication 2	Take two tablets once daily. Take tablets 30 minutes before a meal.
Medication 3	Take 1 tablet as needed.

Medication	**Prescription information**
Medication 1 = Red bead	Take one tablet twice daily.
Medication 2= Blue bead	Take two tablets once daily. Take tablets 30 minutes before a meal.
Medication 3 = Green bead	Take 1 tablet as needed.

*Note to facilitator(s): If participants are unable to correctly setup medication routines, family members or other support persons may assist them with developing a medication routine to ensure safety.

Example of medications organized correctly

*Answers may vary, as medications can be taken at different times of the day to fulfill the prescription requirements. For example, Medication 2 may be taken in the morning, noon, or evening 30 minutes prior to a meal.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Morning						
						
Noon						
 	 	 	 	 	 	 
Evening						
Bed						
						

Secondary Stroke Prevention and Support: An Occupational Therapy Program
Participant Handout

Program Goal: The goal of this program is to help support people after a stroke and give them information and skills to manage health and live a healthy lifestyle to reduce the risk of having a stroke.

Session Goals:

- At the end of the group, I will know more about stroke recovery.
- At the end of the group, I will know more about working with my healthcare team after a stroke.
- At the end of the group, I will be able to manage my medications.

SESSION 3: Managing Health During Recovery Process

What is stroke recovery?

- Stroke recovery begins right after a stroke and lasts for the rest of your life.
- It is important to start stroke rehabilitation right after a stroke (Bartels, Duffy, & Beland, 2016).

- Stroke recovery is different for everyone (National Stroke Association, 2017a).
    - Different parts of the brain can be impacted in different ways (Woodson, 2014).
    - The brain can react in different ways to heal after a stroke (National Stroke Association, 2017a).
- The speed of recovery will lessen over time (Woodson, 2014).

Who is on the healthcare team?

- Doctor: Team leader. Can answer questions about stroke and recovery.
- Nurse: Helps with managing health after a stroke.
- Occupational Therapist (OT): Helps people with daily activities such as dressing, bathing, working, driving, hobbies, etc.

- Physical Therapists (PT): Helps people build strength, endurance, and balance needed for daily life.
- Speech-Language Pathologists (SLP): Helps people with communication needs.
- Dietician: Helps people with diet and nutrition needs.
- Team members may vary. There may be other people on your team (Bartels et al., 2016; National Stroke Association, 2017a)

What about medication?

- It is important to take prescribed medications correctly.
- It is important to have a medication routine.
- There are ways to help you remember to take your medication
    - These are called memory aids
- Memory aids

    - Pill boxes
    - Phone alerts
    - Sticky-notes etc.
- Ask your doctor if you have questions about your medication

Homework:

Managing Health During Recovery Process SMART Goal:

_____

_____

_____

_____

Before the next session, keep track of your progress toward this goal and the goal you set in the session before and write about your progress.

References

Bartels, M. N., Duffy, C. A., & Beland, H. E. (2016). Pathophysiology, medical management, and acute rehabilitation of stroke survivors. In G. Gillen (Ed.), *Stroke rehabilitation: A function-based approach* (4th ed.) (pp. 2-45). St. Louis, MO: Elsevier.

National Stroke Association. (2017a). *Rehabilitation therapy after a stroke.* Retrieved from http://www.stroke.org/we-can-help/stroke-survivors/just-experienced-stroke/rehab

Woodson, A. M. (2014). Stroke. In M. V. Radomski & C. A. Trombly-Latham (Eds.), *Occupational therapy for physical dysfunction* (7th ed.) (pp. 999-1041). Baltimore, MD: Lippincott Williams & Wilkins.

Secondary Stroke Prevention and Support: An Occupational Therapy Program Facilitator's Guide

Program Objective: The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

Session Objectives:

- At the end of the session, participants will explain their understanding of the impact of stress on health.
- At the end of the session, participants will identify two relaxation techniques to manage stress during the recovery process.
- At the end of the session, participants will demonstrate competence in two relaxation techniques to be utilized as coping skills to promote health management and maintenance. (performance capacity)

SESSION 4: Stress Management

Group Membership: A group of community dwelling individuals who have experienced a stroke, as well as their family members, or other supports (e.g. friends).

Session Structure:

Introduction

- Welcome group and review the objective of the *Secondary Stroke Prevention and Support: An Occupational Therapy Program*.
- Last session focused on managing health during the recovery process. To review, we provided information about the stroke recovery process, and collaborating with healthcare providers. We also provided information about medication management and practiced using memory aids to establish a medication routine. Have group members share their thoughts and feelings about the homework from Session 3. Encourage group members to share the progress they made toward the SMART goals they set in the previous sessions. Ask group members if anyone has any questions, comments, or feedback before progressing with next topic.
- Warm-up: Group members will independently complete the pre-assessment or with assistance if necessary.
- Expectations of the group
    - Be respectful of others and their personal experiences/challenges
    - Be actively engaged in the group process
    - We encourage you to ask questions and engage in discussion
- Objectives:

    - At the end of the session, participants will explain their understanding of the impact of stress on health.
    - At the end of the session, participants will identify two relaxation techniques to manage stress during the recovery process.
    - At the end of the session, participants will demonstrate competence in two relaxation techniques to be utilized as coping skills to promote health management and maintenance. (performance capacity)
- Brief outline: In today's group we will be providing you information on coping skills to help manage stress associated with the stroke recovery process. We will also be practicing two relaxation techniques that you may incorporate into your daily routines.

Content

General Information

Lifestyle Habits that are modifiable risk factors for stroke

- Poor diet
- Limited exercise
- Smoking/tobacco use
- Alcohol use (Bartels et al., 2016; CDC, 2017b).

Another modifiable risk factor for stroke is stress.

Stress

- Stress is considered a risk factor for stroke (Lawrence et al., 2013)
- A common source of anxiety for individuals is not having sufficient information regarding their diagnosis (Kim et al., 2015).
- If a person is unable to cope with stress and anxiety after experiencing a stroke, they will have more difficulty making changes to behavior, even if they are aware that change is needed (Evans-Hudnall et al., 2014).
    - Thus this *Secondary Stroke Prevention and Support: An Occupational Therapy Program* will not be nearly as effective in assisting people to make modifications to their lifestyle habits and routines if stress is not addressed.
- Additionally, to support change it is important to repeat new habits in a supportive environment (Kielhofner, 2008).
    - Thus, this program is eight sessions in length and participants are actively involved to assist in making the changes happen.

What is coping?

- Learning about stroke (addressed in Session 1)
- Adapting healthy habits and routines such as diet and medication (addressed throughout Program)
- Collaborating with healthcare providers (addressed in Session 3)
- Using relaxation strategies to cope with stress and anxiety
- Exploring various coping skills (will be explored further in Session 7) (Lorig et al., 2012; Pendleton & Schultz-Krohn, 2005)

Relaxation Strategies

- Breathing exercises
- Visualization (Levitt, 2005)
- Benefits of relaxation techniques can occur almost immediately after they are implemented and generally have low complexity, which makes them easier to learn (Davis, Eshelman, & McKay, 2008).

Breathing exercises:

- Breathing techniques have been shown to be useful in reducing muscle tension, headaches, irritability, and fatigue. These exercises have also been useful in relieving symptomatology of depression and anxiety (Davis et al., 2008).

Visualization:

- Imagining a pleasant and comforting scene can help promote relaxation (Levitt, 2005).
- Practicing breathing exercises prior to visualization increases the effectiveness of the visualization exercise (Levitt, 2005).

<u>Activity</u>

Relaxation Techniques: Group members will engage in the guided practice of two relaxation exercises: breathing and visualization, in order to reduce stress and improve health management and maintenance. A detailed description of the activity is attached.

<u>Sharing</u>

- Encourage group members to share what they learned from this session about stress and the impact of stress on health.
- Encourage group members to share what they learned about the breathing and visualization exercises.
- Encourage group members to share what they learned about coping.
- If comfortable, encourage group members to share their special place they visualized during the relaxation exercises.

Processing

- How did the breathing exercise make you feel?
- How did the visualization exercise make you feel?
- How did you feel within the group environment (Was it easy or difficult to engage in the activity? Would you prefer to do relaxation exercises alone or with others)?
- How do you feel the relaxation exercises will help you to cope with stress in your daily life?
- How do you feel the session has been helpful in learning about managing stress?
- How did this activity affect your sense of competence in managing your stress through the use of relaxation exercises? (personal causation)

Generalizing

- Prompt group members to identify key points from the group session.
- Have group members identify why they believe having an understanding of stress and its impact on health is important.
- Why is using relaxation techniques to manage stress important?

Application

- Facilitator(s) will inform participants about a resource:
  California Social Work Education Center. (n.d.) *The big list of self-care activities*. Retrieved from calswec.berkeley.edu/files/uploads/activity_6c-f_self-care_activities.doc
- Facilitator(s) will encourage group members to explore this list of potential coping skills they can use, and challenge them to try doing an activity from the list.
- Have participants complete post-assessment and review answers.
- Have group members write a SMART goal related to stress management (e.g. practicing breathing exercises one time per day).
- Homework: Homework instructions are included on the participant handouts. Participants will write down the SMART goal they set during the session and will keep track of their progress toward this goal and the goals set in previous sessions. Participants will write about their progress in a journal/planner etc. before the next session. Participants are encouraged to write about their progress to help them stay accountable toward reaching the goals they set throughout the Program. Participants can now assess progress they have made in the SMART goals they have set in Sessions 2, 3, and 4.

Summary

- Review objectives and ask group members if they believe objectives have been met.

- Thank group members for their participation and introduce next week's topic (Healthy Eating Habits).

Activity description: Group facilitator(s) will guide group members in practicing two relaxation exercises: breathing and visualization, to reduce stress. Prior to engaging in the activity, the facilitator(s) will prepare the group members for the exercises by encouraging group members to find a comfortable position (sitting or lying down) and encourage group members to close their eyes if they feel comfortable. The first relaxation exercise conducted will be breathing. Specific instructions are below. The facilitator(s) will lead the breathing exercise for approximately 5 to 10 minutes. Initially, facilitator(s) will verbalize instructions to group members, but these instructions will gradually diminish to allow group members to independently practice controlling their breathing. Following this exercise, facilitator(s) will guide group members through a visualization exercise to further promote relaxation and relieve stress. The group members will practice the visualization exercise for approximately 5 to 10 minutes. Specific instructions for the visualization exercise are below.

The purpose of this activity is to provide participants the opportunity to practice relaxation exercises to help reduce stress and promote engagement in health management and maintenance. The facilitator(s) promotes competence by gradually providing less cues to participants in order to increase independence in relaxation exercises. This activity addresses volition through the use of a personalized visualization exercise.

Instructions for breathing exercise:

1. *Breathe in deeply through your nose, as you say to yourself "breathe in" or count to three as you inhale.*
2. *Before exhaling, allow yourself to hold your breath briefly.*
3. *Tell yourself to "relax" or count to three and slowly exhale through your mouth.*
4. *As you take your next breath, notice the areas of your body that are most tense.*
5. *When you breathe out, allow that tension to leave your body* (Davis et al., 2008)

Instructions for visualization exercise:
*Less is more.
The facilitator(s) should provide group members with a general prompt to allow group members to be actively engaged in the exercise, which can increase their feelings of competence and control (Levitt, 2005)

1. *Imagine a special place that is safe and calm and provides you comfort.*
2. *Think about the smells, tastes, sights, and feelings you have in this place.*
3. *Example: this place could be in your favorite room in your home or outside in a park* (Davis et al., 2008).

Pre-Assessment

Identify two stressors in your life.

_____

I feel confident in my ability to manage stress.

1 2 3 4 5

1 Strongly disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree

What is an effective and healthy coping tool you have used to manage stress in the past, if any?

_____

Stress can increase a person's risk for stroke.

True False

Name two relaxation techniques to manage stress.

_____

Post-Assessment

Identify two stressors in your life.

_____

I feel confident in my ability to manage stress.

1 2 3 4 5

1 Strongly disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree

What is a healthy coping tool you plan on using to manage stress in the future?

_____

Stress can increase a person's risk for stroke.

True False

Name two relaxation techniques to manage stress.

_____

Answer Key

Stress can increase a person’s risk for stroke.

True False

Name two relaxation techniques to manage stress.

Breathing and visualization

Secondary Stroke Prevention and Support: An Occupational Therapy Program
Participant Handout

Program Goal: The goal of this program is to help support people after a stroke and give them information and skills to manage health and live a healthy lifestyle to reduce the risk of having a stroke.

Session Goals:

- At the end of the group, I will know more about the impact of stress on my health.
- At the end of the group, I will know more about relaxation skills I can use to manage stress.
- At the end of the group, I will be able to do two relaxation exercises to cope with stress.

SESSION 4: Stress Management

What puts me at-risk for a stroke?

Lifestyle Habits that are modifiable risk factors for stroke

- Poor diet
- Limited exercise
- Smoking/tobacco use

- Alcohol use (Bartels et al., 2016; CDC, 2017b).

Another modifiable risk factor for stroke is stress (Lawrence et al., 2013).

How can stress impact me?

It will be very hard to make changes to your lifestyle to improve your health if you are unable to cope with stress (Evans-Hudnall et al., 2014).

What is coping?

- Learning about stroke
- Changing habits and routines to promote health (diet, medication)
- Working with healthcare team members
- Using relaxation strategies to cope with stress and anxiety
- Exploring various coping skills (Lorig et al., 2012; Pendleton & Schultz-Krohn, 2005)

What relaxation strategies can I use to cope with stress?

Relaxation Strategies

- Breathing exercises
- Visualization (Levitt, 2005)
    - These exercises can help you manage stress (Davis et al., 2008; Levitt, 2005).

Instructions for breathing exercise:

1. Breathe in deeply through your nose, as you say to yourself "breathe in" or count to three as you inhale.
2. Before exhaling, allow yourself to hold your breath briefly.
3. Tell yourself to "relax" or count to three and slowly exhale through your mouth.
4. As you take your next breath, notice the areas of your body that are most tense.

5. When you breathe out, allow that tension to leave your body (Davis et al., 2008)

Instructions for visualization exercise:

1. Imagine a special place that is safe and calm and provides you comfort.
2. Think about the smells, tastes, sights, and feelings you have in this place.
3. Example: this place could be in your favorite room in your home or outside in a park (Davis et al., 2008).

Homework:

Stress Management SMART Goal:

_____

_____

_____

_____

Before the next session, keep track of your progress toward this goal and the goals you set in the sessions before and write about your progress.

References

Bartels, M. N., Duffy, C. A., & Beland, H. E. (2016). Pathophysiology, medical management, and acute rehabilitation of stroke survivors. In G. Gillen (Ed.) *Stroke rehabilitation: A function-based approach* (4th ed.) (pp. 2-45). St. Louis, MO: Elsevier.

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Pendleton, H. M. & Schultz-Krohn, W. (2005). Psychosocial issues in physical disability. In E. Cara & A. MacRae (Eds.), *Psychosocial occupational therapy: A clinical practice* (2nd ed.) (pp. 359-393). Canada: Thomson Delmar Learning.

Secondary Stroke Prevention and Support: An Occupational Therapy Program Facilitator's Guide

Program Objective: The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

Session Objectives:

- At the end of the session, participants will give two examples of the benefits of healthy eating habits.
- At the end of the session, participants will modify a recipe to support incorporation of healthy eating habits into daily routines to support health management and maintenance. (performance capacity and habituation)
- At the end of the session, participants will identify an increase in personal causation to plan healthy meals to manage health.

SESSION 5: Habits for Healthy Eating

Group Membership: A group of community dwelling individuals who have experienced a stroke, as well as their family members, or other supports (e.g. friends).

Session Structure:

Introduction

- Welcome group and review the objective of the *Secondary Stroke Prevention and Support: An Occupational Therapy Program*.
- Last session focused on stress management and utilizing relaxation techniques to reduce stress. To review, we provided information about stress management, and how coping strategies can be used to reduce stress and support the recovery process. We also had the opportunity to practice two different relaxation techniques you are able to incorporate into your daily routines to help reduce stress in your life. Have group members share their thoughts and feelings about the homework from Session 4. Encourage group members to share the progress they made toward the SMART goals they set in the previous sessions. Ask group members if anyone has any questions, comments, or feedback before progressing with next topic.
- Warm-up: Group members will independently complete the pre-assessment or with assistance if needed.
- Expectations of the group
    - Be respectful of others and their personal experiences/challenges
    - Be actively engaged in the group process

    - We encourage you to ask questions and engage in discussion
- Objectives:
    - At the end of the session, participants will give two examples of the benefits of healthy eating habits.
    - At the end of the session, participants will modify a recipe to support incorporation of healthy eating habits into daily routines to support health management and maintenance. (performance capacity and habituation)
    - At the end of the session, participants will identify an increase in personal causation to plan healthy meals to manage health.
- Brief outline: In today's group we will be providing you information on healthy eating habits to support health management and maintenance. We will also be practicing applying healthy eating tips during a meal planning activity.

Content

General Information

Lifestyle Habits that are modifiable risk factors for stroke

- Poor diet
- Limited exercise
- Smoking/tobacco use
- Alcohol use (Bartels et al., 2016; CDC, 2017b).

Today we will be talking about healthy eating.

Basics of Eating Healthier

- Be conscientious of caloric intake
- Eat different types of foods
- Limit the amount of unhealthy foods consumed (Powers, Dodd, & Jackson, 2011)

How to Support Healthy Eating Habits

- Incorporate more unprocessed foods into diet
- Consume more fruits, vegetables, and whole grains
- Shop in produce aisles
- Replace unhealthy snack items, such as potato chips with bananas, whole-grain crackers, etc. (Powers et al., 2011)

Benefits of Healthy Eating

- Having more energy, feeling less tired, and reducing one's risk for developing chronic diseases (Powers et al., 2011)

Tips for Limiting Fat in Diet

- Purchase low-fat or non-fat food items if possible

- When sauteing, it is useful to use vegetable oils and olive oils to help prevent raising cholesterol levels
- Bake and broil; limit frying food, such as meats
- Limit processed meats such as bacon, hot dogs, etc. and replace with lean meats, including fish and poultry
- Choose non-fat or reduced-fat dairy products (milk, cheeses)
- Limit using condiments like butter, margarine, and mayonnaise and replace with other items like low-calorie salad dressing
- If you have a meal that is higher in fat, try to limit fat intake during other meals that day (ex. High-fat lunch, lower fat meal at breakfast and dinner) (Powers et al., 2011)

Tips for Limiting Sugar in Diet

- Look for terms such as sucrose, glucose, fructose, or high fructose corn syrup on food labels. If these are listed as some of the first ingredients, limit consumption of these items
- Consider using sugar substitutes or using lemons to flavor beverages, such as tea
- Purchase snack items that are lower in sugar, such as yogurt, fruits, and graham crackers (Powers et al., 2011)

Water

- Since human bodies are 60-70% water, it is important to drink 8-10 cups of water a day; more is necessary if a person is physically active (Powers et al., 2011)

*Encourage group members to discuss with their physicians and dieticians regarding specific dietary needs and restrictions related to their individual health needs and prescribed medications.

<u>Activity</u>

Meal Planning: Group members will engage in an individualized meal planning activity in order to establish healthier eating habits to improve health management and maintenance. A detailed description of the activity is attached.

<u>Sharing</u>

- Encourage group members to share what they learned from this session about healthy eating habits.
- Encourage group members to share what they learned from the meal planning activity.
- If comfortable, encourage group members to share their adapted healthy recipes.

<u>Processing</u>

- How did you feel during the meal planning activity?

- What was the hardest part of the meal planning activity?
- How did you feel within the group environment (Was it easy or difficult to engage in the activity)?
- How do you feel about your new healthy recipe? (Are you planning to make this meal? Do you feel you will make this meal part of your regularly planned meals?)
- How do you feel the meal planning activity will help you to make healthier eating choices, and plan healthier meals?
- How do you feel the session has been helpful in learning about healthy eating?
- How did this activity affect your sense of competence in healthy meal planning? (personal causation)

Generalizing

- Prompt group members to identify key points from the group session.
- Have group members identify why they believe having an understanding of eating healthy and establishing healthy eating habits is important to support health.

Application

- Have participants complete post-assessment and review answers.
- As you reflect on this process, what do you think the challenges might be in incorporating the information into your daily routines?
- Have group members write a SMART goal related to healthy eating (e.g. eating three vegetables every day).
- Homework: Homework instructions are included on the participant handouts. Participants will write down the SMART goal they set during the session and will keep track of their progress toward this goal and the goals set in previous sessions. Participants will write about their progress in a journal/planner etc. before the next session. Participants are encouraged to write about their progress to help them stay accountable toward reaching the goals they set throughout the Program. Participants can now assess progress they have made in the SMART goals they have set in Sessions 2, 3, 4, and 5.

Summary

- Review objectives and ask group members if they believe objectives have been met.
- Thank group members for their participation and introduce next week's topic (Physical Activity Routines).

Activity description: Group members will participate in an individualized meal planning activity. Each group member will choose a favorite or regularly prepared meal that they prepare/eat in their home. Group members will be challenged to identify ways that they

can alter their chosen meal to make it a healthier choice. Group facilitator(s) will provide participants with two examples of meals with suggestions for making them healthier (see examples below). Group members will use these examples, and the general content related to healthy eating to help them brainstorm healthy adaptations to their meal. Group members will fill out a recipe card with their new healthy recipe to enable them to take the recipe card home to use to guide meal preparation.

The purpose of this activity is to provide participants an opportunity to practice incorporating healthy habits into existing meal planning routines. This activity will promote engagement in health management and maintenance, and increase participants' personal causation and performance capacity in their ability to make healthy choices. This activity addresses volition as participants are given a choice as to what meal they would like to adapt.

Supplies:

- Recipe card per participant
- Writing utensil per participant

Examples:
Ways to make spaghetti healthier:

- Use whole-wheat pasta or spaghetti squash
- Use ground turkey instead of ground beef
- Include vegetables in the sauce such as peppers, onions, and mushrooms
- Have a salad or vegetable/fruit on the side in addition to, or instead of breadsticks/garlic toast
- Make a homemade tomato sauce rather than using processed spaghetti sauce
- Use other herbs/seasonings to flavor beyond salt, such as fresh basil, oregano, etc.
- Drink water instead of carbonated beverages

Ways to make burgers and fries healthier:

- Use turkey patties or veggie patties, instead of beef patties
- Use whole-wheat buns, or no buns
- Add vegetables such as lettuce, tomatoes, avocados
- Substitute condiments for fresh vegetables (e.g. tomato for ketchup, avocado for mayonnaise)
- Substitute french fries for sweet potato fries
- Limit amount of salt added to fries
- Have a salad or vegetable/fruit on the side
- Use low-fat cheese or no cheese
- Drink water instead of carbonated beverages

Pre-Assessment

I feel confident in my ability to plan healthy meals.

1 2 3 4 5

1 Strongly disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree

What does healthy eating mean to you?

_____

_____

What are two health benefits of healthy eating?

_____

Post-Assessment

I feel confident in my ability to plan healthy meals.

1 2 3 4 5

1 Strongly disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree

What does healthy eating mean to you?

_____

_____

What are two health benefits of healthy eating?

_____

Answer Key

What are two health benefits of healthy eating? (answers may vary)

- Having more energy
- Feeling less tired
- Reduces the risk of chronic diseases

Healthy Meal Planning

Directions: Pick a favorite/common meal you cook/eat. Write down the ingredients to make this meal. Then finds ways to make the meal healthier. Two examples are listed below.

Examples:

Ways to make spaghetti healthier:

- Use whole-wheat pasta or spaghetti squash
- Use ground turkey instead of ground beef
- Use lean ground beef if using ground beef
- Include vegetables in the sauce such as peppers, onions, and mushrooms
- Have a salad or vegetable/fruit on the side in addition to, or instead of breadsticks/garlic toast
- Make a homemade tomato sauce rather than using processed spaghetti sauce
- Use other herbs/seasonings to flavor beyond salt, such as fresh basil, oregano, etc.
- Drink water instead of carbonated beverages

Ways to make burgers and fries healthier:

- Use turkey patties or veggie patties, instead of beef patties
- Use whole-wheat buns, or no buns
- Add vegetables such as lettuce, tomatoes, avocados
- Use fresh vegetables instead of condiments (e.g. tomato for ketchup, avocado for mayonnaise)
- Have sweet potato friends instead of french fries
- Limit amount of salt added to fries
- Have a salad or vegetable/fruit on the side
- Use low-fat cheese or no cheese
- Drink water instead of soft drinks/soda

Example

Original recipe ingredients	New healthier recipe ingredients
• Spaghetti noodles • Jar of spaghetti sauce • Ground beef • Garlic toast • Salt and pepper	• Whole-wheat pasta or spaghetti squash • Ground turkey or lean ground beef • Peppers, onions, and mushrooms in sauce • Side salad with a vinaigrette • Cup of fruit • Homemade tomato sauce (pureed tomatoes and herbs) • Fresh basil, oregano, etc.

Your Recipe

Original recipe ingredients	New healthier recipe ingredients

* Some ingredients may not change and can be used in the new healthier recipe.

Secondary Stroke Prevention and Support: An Occupational Therapy Program
Participant Handout

Program Goal: The goal of this program is to help support people after a stroke and give them information and skills to manage health and live a healthy lifestyle to reduce the risk of having a stroke.

Session Goals:

- At the end of the group, I will know more about how food impacts health.
- At the end of the group, I will be able to make healthier eating choices in my daily life.
- At the end of the group, I will feel able to make changes to my eating habits.

SESSION 5: Habits for Healthy Eating

What puts me at-risk for a stroke?

Lifestyle Habits that are modifiable risk factors for stroke

- Poor diet
- Limited exercise
- Smoking/tobacco use

- Alcohol use (Bartels et al., 2016; CDC, 2017b).

Today we will be talking about healthy eating.

How can I eat healthier?

- Count my calories
- Shop in produce aisles
- Eat different types of foods
- Swap unhealthy snacks, like potato chips, for a healthier snack, such as whole-grain crackers.
- Eat more unprocessed foods
- Eat more whole grains
- Eat more fresh foods such as fruits and vegetables (Powers, Dodd, & Jackson, 2011).

Why should I eat healthier?

- To have more energy
- To feel less tired
- To prevent health problems (Powers, et al., 2011).

Tips for Eating Less Fat

- Buy low-fat or non-fat food
- When sautéing, use vegetable oils and olive oils
- Bake and broil food instead of frying
- Eat more lean meats, such as fish and poultry
- Eat less processed meats such as bacon and hotdogs
- Choose non-fat or reduced-fat dairy products, such as milk and cheeses
- Use less condiments like butter, margarine, and mayonnaise
- Use low-calorie salad dressings, such as vinaigrette

- If you have a meal that is higher in fat, try to eat less fat in other meals that day (ex. High-fat lunch, lower fat meal at breakfast and dinner) (Powers et al., 2011).

Tips for Eating Less Sugar

- Look for terms such as sucrose, glucose, fructose, or high fructose corn syrup on food labels. If these are listed as some of the first ingredients, try to eat less of these foods
- Use lemons to flavor beverages, such as tea, instead of sugar
- Buy snack items that have less sugar, such as yogurt, fruits, and graham crackers (Powers et al., 2011).

What About Water?

- Humans are 60-70% water
- It is important to drink 8-10 cups of water a day

- You may need more water if you exercise (Powers et al., 2011).

* Talk to your doctor or a dietician about specific diet needs

Homework: Habits for Healthy Eating SMART Goal:

_____

_____

_____

_____

Before the next session, keep track of your progress toward this goal and the goals you set in the sessions before and write down your progress.

References

Bartels, M. N., Duffy, C. A., & Beland, H. E. (2016). Pathophysiology, medical management, and acute rehabilitation of stroke survivors. In G. Gillen (Ed.) *Stroke rehabilitation: A function-based approach* (4th ed.) (pp. 2-45). St. Louis, MO: Elsevier.

Centers for Disease Control and Prevention. (2017b). *Stroke.* Retrieved from https://www.cdc.gov/stroke/index.htm

Powers, S. K., Dodd, S. L., & Jackson, E. M. (2011). *Total fitness & wellness* (3rd ed.). S. Lindelof, K. Hopperstead, S. Scharf, W. Earl, & C. Gloodt (Eds.). San Francisco, CA: Pearson Education, Inc.

Secondary Stroke Prevention and Support: An Occupational Therapy Program Facilitator's Guide

Program Objective: The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

Session Objectives:

- At the end of the session, participants will identify physical activities and benefits related to health.
- At the end of the session, participants will develop a movement schedule to support incorporation of regular physical activity into daily routines to support health management and maintenance. (habituation and performance capacity)
- At the end of the session, participants will identify a change in personal causation to develop physical activity routines to manage health.

SESSION 6: Physical Activity Routines

Group Membership: A group of community dwelling individuals who have experienced a stroke, as well as their family members, or other supports (e.g. friends).

Session Structure:

Introduction

- Welcome group and review the objective of the *Secondary Stroke Prevention and Support: An Occupational Therapy Program.*
- Last session focused on healthy eating and incorporating healthy eating habits into routines. To review, we provided information about healthy eating, and how eating healthy impacts health. We also had the opportunity to engage in a meal planning activity to make adaptations to a meal to make it healthier. Have group members share their thoughts and feelings about the homework from Session 5. Encourage group members to share the progress they made toward the SMART goals they set in the previous sessions. Ask group members if anyone has any questions, comments, or feedback before progressing with next topic.
- Warm-up: Group members will independently complete the pre-assessment or with assistance if needed.
- Expectations of the group
    - Be respectful of others and their personal experiences/challenges
    - Be actively engaged in the group process
    - We encourage you to ask questions and engage in discussion
- Objectives:

    - At the end of the session, participants will identify physical activities and benefits related to health.
    - At the end of the session, participants will develop a movement schedule to support incorporation of regular physical activity into daily routines to support health management and maintenance. (habituation and performance capacity)
    - At the end of the session, participants will identify a change in personal causation to develop physical activity routines to manage health.
- Brief outline: In today's group we will be providing you information on physical activity to support health management and maintenance. We will also be designing a movement schedule for two weeks.

Content

General Information

Lifestyle Habits that are modifiable risk factors for stroke

- Poor diet
- Limited exercise
- Smoking/tobacco use
- Alcohol use (Bartels et al., 2016; CDC, 2017b).

Today we will be talking about exercise, or physical activity.

Physical activity

- All physical movement, regardless of the amount of energy needed and used, and the reason for engaging in the activities
    - Ex. Walking in the mall, carrying groceries, using the stairs, etc. (Powers, Dodd, & Jackson, 2011).
- Engaging in physical activities routinely can help enhance health and lessens the risk of developing chronic conditions (CDC, 2018).
- Routine physical activity is one of the best things you can do to improve your health (CDC, 2018).

Engaging in regular physical activity has the potential following benefits:

- Manage weight
- Decrease the risk of cancer
- Increase function in daily life
- Reduce risk for falls (CDC, 2018)
- Decreased risk of developing heart disease and diabetes
- Build stronger muscles and bones
- Enhances mental health and quality of life

- Increase life span (CDC, 2018; Powers, Dodd, & Jackson, 2011).

Steps to Take to Improve Physical Fitness

- Choose physical activities that you enjoy doing (walking, biking, swimming, etc.).
- Find others, such as friends and family, to do physical activities with for support and to help you stay accountable.
- Warm-up before engaging in different activities to prepare body (increase temperature of muscles, increase blood flow, reduces risk of injuries).
- Cool down after activities to prevent pooling of blood in large vessels and to bring body back to resting state (Powers, Dodd, & Jackson, 2011).

Ways to incorporate movement into daily activities

- Parking in back of parking lots
- Use stairs instead of elevators
- Walk or ride bike when possible when running errands, instead of driving or taking the bus
- Replace time spent watching television or playing video games with taking an afternoon/evening walk or playing tennis with a friend/family member

Important tip:

- Talk to your doctor before making major changes to physical activity routines to ensure safety.

<u>Activity</u>

Movement Schedule: Group members will engage in an individualized movement schedule activity in order to establish physical activity routines to improve health management and maintenance. A detailed description of the activity is attached.

<u>Sharing</u>

- Encourage group members to share what they learned from this session about physical activity and the impact on health.
- Encourage group members to share what they learned from the movement schedule activity.
- If comfortable, encourage group members to share one physical activity they plan on engaging in, in the next couple weeks.
- Encourage group members to share their favorite physical activity.

<u>Processing</u>

- How did you feel during the movement schedule activity?
- What was the hardest part of the movement schedule activity?
- How did you feel within the group environment (Was it easy or difficult to engage in the activity)?

- How do you feel the movement schedule activity will help you to incorporate physical activity into your daily life?
- How do you feel including supports in your movement schedule will impact your performance in your physical activity routine?
- How do you feel the session has been helpful in learning about physical activity?
- How did this activity affect your sense of competence in developing a routine for physical activity? (personal causation)

Generalizing

- Prompt group members to identify key points from the group session.
- Have group members identify why they believe having an understanding of physical activity and establishing routines for physical activity is important to support health.

Application

- Have participants complete post-assessment and review answers.
- As you reflect on this process, what do you think the challenges might be in following through on your planned physical activities you identified in your movement schedule?
- Have group members write a SMART goal related to physical activity (e.g. walking three times a week with a friend). Group members may consider using the movement schedule to help them write a SMART goal**.**
- Homework: Homework instructions are included on the participant handouts. Participants will write down the SMART goal they set during the session and will keep track of their progress toward this goal and the goals set in previous sessions. Participants will write about their progress in a journal/planner etc. before the next session. Participants are encouraged to write about their progress to help them stay accountable toward reaching the goals they set throughout the Program. Participants can now assess progress they have made in the SMART goals they have set in Sessions 2, 3, 4, 5 and 6.

Summary

- Review objectives and ask group members if they believe objectives have been met.
- Thank group members for their participation and introduce next week's topic (Alcohol and Tobacco: Choosing Healthier Habits).

Activity description: Group members will participate in an individualized movement schedule activity. Each group member will be given a "Movement Schedule" worksheet (attached) to plan specific physical activities for a two-week period. Group members will

be encouraged to plan a movement routine that is realistic and attainable. For example, if group members have not exercised at all in the past, members are discouraged from planning intense physical activity, as this is both unrealistic, and potentially dangerous (CDC, 2018). Group members are asked to be as specific as possible when planning their movement routine. Group members will identify what specific activities they plan to do, the duration of the activities, how often they plan to do the activities, where they plan to do the activities, and other relevant details. Group members are encouraged to include family members, friends, and others for support and to help keep them accountable.

The purpose of this activity is to provide participants an opportunity to practice creating a movement schedule to incorporate physical activity into daily life to promote routinization of physical activity. This activity will increase participants' personal causation and performance capacity to increase engagement in health management and maintenance. This activity addresses volition as participants are allowed to choose physical activities of their choice when developing the schedule.

Supplies:

- Worksheet per participant
- Writing utensil per participant

Pre-Assessment

I feel confident I can plan physical activities that I am able to do.

1 2 3 4 5

1 Strongly disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree

Which of the following are physical activities? Circle all that apply.

a. Carrying groceries
b. Walking to get the mail
c. Lifting weights at a fitness center
d. Taking the stairs

What are 2 benefits of physical activity?

_____

Post-Assessment

I feel confident I can plan physical activities that I am able to do.

1 2 3 4 5

1 Strongly disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree

Which of the following are physical activities. Circle all that apply.

a. Carrying groceries
b. Walking to get the mail
c. Lifting weights at a fitness center
d. Taking the stairs

What are 2 benefits of physical activity?

_____

Answer Key

Which of the following are physical activities. Circle all that apply.

a. Carrying groceries
b. Walking to get the mail
c. Lifting weights at a fitness center
d. Taking the stairs

What are benefits of physical activity? (answers may vary)

- Manage weight
- Decrease the risk of cancer
- Increase function in daily life
- Reduce risk for falls
- Decreased risk of developing heart disease and diabetes
- Build stronger muscles and bones
- Enhances mental health and quality of life
- Increase life span

Movement Schedule

Directions: Answer the questions below. Then use the movement schedule to plan physical activities for yourself for the next two weeks.

What physical activities do I want to do? Am I able to do these physical activities?

What physical activities am I going to do?

What days will I do each physical activity in the next two weeks?

How long will I do each activity?

Will I do these physical activities alone or with others?

Where will I do these physical activities?

Week 1
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

Week 2
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

Secondary Stroke Prevention and Support: An Occupational Therapy Program
Participant Handout

Program Goal: The goal of this program is to help support people after a stroke and give them information and skills to manage health and live a healthy lifestyle to reduce the risk of having a stroke.

Session Goals:

- At the end of the group, I will know more about how physical activity impacts health.
- At the end of the group, I will be able to make physical activity part of my routine.
- At the end of the group, I feel able to change my physical activity habits to manage my health.

SESSION 6: Physical Activity Routines

What puts me at-risk for a stroke?

Lifestyle Habits that are modifiable risk factors for stroke

- Poor diet
- Limited exercise
- Smoking/tobacco use

- Alcohol use (Bartels et al., 2016; CDC, 2017b).

Today we are going to talk about exercise, or physical activity.

What is Physical Activity?

- All physical movements, big and small.
    - Ex. Walking in the mall, carrying groceries, using the stairs, etc. (Powers, Dodd, & Jackson, 2011).
- Doing physical activity is good for your health and decreases your risk of chronic health conditions (CDC, 2018).
- Regular physical activity is one of the best things you can do for your health (CDC, 2018).

Why should I do Physical Activity?

- Physical activity may…
    - Help me to manage my weight

    - Lower my risk of cancer, heart disease, and diabetes
    - Increase function in daily life
    - Reduce my risk for falls (CDC, 2018)
    - Help me build stronger muscles and bones
    - Improve my mood and thoughts
    - Increase my lifespan (CDC, 2018; Powers et al., 2011).

Tips to increase Physical Activity

- Choose physical activities that you enjoy doing (walking, biking, swimming, etc.)
- Do physical activities with other people (friends, family)
- Warm-up before physical activities
- Cool down after activities (Powers et al., 2011).

Tips to move more

- Parking in back of parking lots
- Use stairs instead of elevators
- Walk or ride bike when running errands, instead of driving or taking the bus
- Replace time spent watching television or playing video games with taking an afternoon/evening walk or playing tennis with a friend/family member

Important tip

- Talk to your doctor before making major changes to physical activity routines to ensure safety.

Homework: Physical Activity Routines SMART Goal:

_____

_____

_____

_____

Before the next session, keep track of your progress toward this goal and the goals you set in the sessions before and write about your progress.

References

Bartels, M. N., Duffy, C. A., & Beland, H. E. (2016). Pathophysiology, medical management, and acute rehabilitation of stroke survivors. In G. Gillen (Ed.) *Stroke rehabilitation: A function-based approach* (4th ed.) (pp. 2-45). St. Louis, MO: Elsevier.

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Centers for Disease Control and Prevention. (2017b). *Stroke.* Retrieved from https://www.cdc.gov/stroke/index.htm

Powers, S. K., Dodd, S. L., & Jackson, E. M. (2011). *Total fitness & wellness* (3rd ed.). S. Lindelof, K. Hopperstead, S. Scharf, W. Earl, & C. Gloodt (Eds.). San Francisco, CA: Pearson Education, Inc.

Secondary Stroke Prevention and Support: An Occupational Therapy Program Facilitator's Guide

Program Objective: The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

Session Objectives:

- At the end of the session, participants will recognize the impact of alcohol and tobacco use on health and function.
- At the end of the session, participants will identify healthy activities that support health management and maintenance.
- At the end of the session, participants will compose a list of at least three healthy activities to support healthy habits. (habituation)

Session 7: Alcohol and Tobacco: Choosing Healthier Habits

Group Membership: A group of community dwelling individuals who have experienced a stroke, as well as their family members, or other supports (e.g. friends).

Session Structure:

<u>Introduction</u>

- Welcome group and review the objective of the *Secondary Stroke Prevention and Support: An Occupational Therapy Program.*
- Last session focused on physical activity and incorporating physical activity into routines. To review, we provided information about physical activity and the positive impact physical activity can have on health. We had the opportunity to engage in a movement schedule activity to plan physical activity for a two-week period. Have group members share if the movement schedule helped them move more during the past two weeks. Have group members share their thoughts and feelings about the homework from Session 6. Encourage group members to share the progress they made toward the SMART goals they set in the previous sessions. Ask group members if anyone has any questions, comments, or feedback before progressing with next topic.
- Warm-up: Group members will independently complete the pre-assessment or with assistance if needed.
- Expectations of the group
    - Be respectful of others and their personal experiences/challenges
    - Be actively engaged in the group process
    - We encourage you to ask questions and engage in discussion

- Objectives:
    - At the end of the session, participants will recognize the impact of alcohol and tobacco use on health and function.
    - At the end of the session, participants will identify healthy activities that support health management and maintenance.
    - At the end of the session, participants will compose a list of at least three healthy activities to support healthy habits. (habituation)
- Brief outline: In today's group we will be discussing alcohol and tobacco use and we will be providing healthier coping alternatives to support health management and maintenance.

Content

General Information

Lifestyle Habits that are modifiable risk factors for stroke

- Poor diet
- Limited exercise
- Smoking/tobacco use
- Alcohol use (Bartels et al., 2016; CDC, 2017b).

Today we will be talking about alcohol and tobacco use, and the impact of these on health.

Alcohol and tobacco use/smoking increase your risk of having a stroke. Do not start these habits if you do not currently use alcohol/tobacco products. Even if you do not currently use alcohol/tobacco products, this session will benefit you by helping you identify healthy coping skills to support health management and maintenance.

How Alcohol Impacts Health

- Brain function: thinking irrationally and difficulties solving problems
- Decreases balance and coordination
- Depresses mood (Teague, Mackenzie, & Rosenthal, 2009).

Risks Associated with Excessive Alcohol Use

- Heart disease, stroke, liver disease, cancer, brain damage, weight gain/loss, malnutrition, mental health conditions, high-risk sexual behaviors, violence, impulsivity (Teague et al., 2009).
- Alcohol can cause an increase in blood pressure (National Stroke Association, 2018)
- High blood pressure is the strongest indicator of stroke (Deijle et al., 2017)

Drinking in Moderation

- Men: two drinks per day or less
- Women: one drink per day or less
- "One drink is equal to:
    - 12 ounces of beer
    - 5 ounces of wine (1 glass)
    - 1 ¼ to 1 ½ ounces of liquor" (National Stroke Association, 2018, para.16).

Tips to Reduce Alcohol Consumption

- Put healthier beverages in refrigerator such as, milk, water, and juice
- If purchasing, buy alcohol in small quantities (instead of buying a 6-pack of beer, purchase 1-2 bottles at a time)
- If consuming alcohol, drink water with it
- Learn how to assertively say "no" (Teague et al., 2009).

*Ask your doctor for more information about limiting alcohol.

How Smoking Impacts Health

- Causes blood to thicken
- Blood vessels fill with plaque (National Stroke Association, 2018).

Risks Associated with Smoking/Tobacco Use

- Stroke, cancer, COPD, heart and lung disease, and other health conditions (CDC, 2017a).
- Compared to someone who does not smoke, a person who smokes is twice as likely to have a stroke (National Stroke Association, 2018).
- Smokeless tobacco products also have a negative impact on health

Tips to Help Quit Smoking/Using Tobacco

- Begin by creating a smoke-free area, such as at home.
- Avoid being around others when they smoke
- Throw away tobacco and tobacco-related products, such as ashtrays
- Clean, clothes, house, car to remove the smell of smoke from environments
- Get teeth professionally cleaned by a dentist
- Make an appointment with a physician regarding nicotine replacement products
- Buy healthy, low-calorie snacks to help with cravings
- Make efforts known to friends and family regarding quitting efforts for social support (Teague et al., 2009).

*Ask your doctor for further information for help to quit smoking/tobacco use.

Activity

Healthy Activities: Group members will engage in an interactive game to explore potential healthy activities they can incorporate into their daily lives as an alternative to unhealthy habits such as smoking and alcohol use. A detailed description of the activity is attached.

Sharing

- Group members are encouraged to share the list of healthy activities they thought of after each round of the activity.
- Encourage group members to share what they learned from the activity.
- If comfortable, encourage group members to share one healthy activity they plan on engaging in, in the next couple weeks and what about the activity interests them.
- Encourage group members to share what they learned from this session about the impact of smoking and alcohol use on health.

Processing

- How did you feel during the activity?
- What was the hardest part of the activity?
- Was it easy or difficult to name healthy activities?
- How do you feel about the number of activities the group was able to develop?
- How did you feel within the group environment (Was it easy or difficult to engage in the activity)?
- Which of the healthy activities identified are a reflection of your personal interests?
- How do you feel the activity will help you to incorporate healthy activities into your daily life?
- How do you feel the session has been helpful in exploring healthy activities?
- How did this activity affect your sense of competence in establishing a habit of engaging in healthy activities? (personal causation)

Generalizing

- Prompt group members to identify key points from the group session.
- Have group members identify why they believe it is important to have an understanding of the impact of smoking and alcohol use on health and the importance of incorporating healthy activities into daily habits.

Application

- Facilitator(s) will remind participants about the resource recommended in Session 4.
  California Social Work Education Center. (n.d.) *The big list of self-care activities*. Retrieved from calswec.berkeley.edu/files/uploads/activity_6c-f_self-care_activities.doc
- Facilitator(s) will encourage group members to continue to explore this list and add to this list healthy activities they generated during the activity.
- Have participants complete post-assessment and review answers.
- As you reflect on this process, what do you think the challenges might be in engaging in healthy activities?
- Have group members write a SMART goal related to healthy activities (e.g. journaling once per day for two weeks).
- Homework: Homework instructions are included on the participant handouts. Participants will write down the SMART goal they set during the session and will keep track of their progress toward this goal and the goals set in previous sessions. Participants will write about their progress in a journal/planner etc. before the next session. Participants are encouraged to write about their progress to help them stay accountable toward reaching the goals they set throughout the Program. Participants can now assess progress they have made in the SMART goals they have set in Sessions 2, 3, 4, 5, 6, and 7.

<u>Summary</u>

- Review objectives and ask group members if they believe objectives have been met.
- Thank group members for their participation and introduce the final session (Stroke Prevention Conclusion/Wrap-Up).

Activity description: Group members will participate in an interactive game to support exploration of healthy activities to promote healthy habits and replace unhealthy habits, such as smoking and consuming alcohol (Paran, 2009, April 6). The group facilitator(s) will prepare for the activity by writing the letters of the alphabet on slips of paper, folding them up, and placing them in a container. Letters that are difficult to associate with multiple healthy activities should be excluded (e.g. “X”). Before the activity, each member of the group will receive paper and a writing utensil. One group member will draw a slip of paper from the container and read the letter aloud to the group. The group members will write down as many healthy activities they can think of in one minute that start with the specified letter, and the facilitator(s) will keep track of the time. Once the time for the round is up, group members will take turns sharing the activities they came up with. The group members will be encouraged to write down activities other group

members share that are of interest to them. Multiple rounds will be completed of this activity, with a minimum of six suggested rounds (Paran, 2009, April 6).

The purpose of this activity is to provide participants an opportunity to explore healthy activities to promote incorporation of activities into daily life to support health and manage stress. Through this activity, group members will recognize that there are many healthy activities to choose from. This activity will increase participants' interest in healthy activities, as well as increase participants' personal causation and performance capacity to make healthy activities a habit of daily life.

Supplies:

- One piece of paper per participant
- Writing utensil per participant
- Timer
- Small container
- Slips of paper with letters of the alphabet

Pre-Assessment

List three healthy activities that I want and am able to do.

_____

_____

_____

Which of the following are healthy activities? Circle all that apply.

a. Drinking alcohol to manage stress
b. Journaling
c. Taking a walk
d. Talking to a friend
e. Smoking

Smoking can make a person's chance of getting heart disease higher.

a. True
b. False

Post-Assessment

List three healthy activities that I want and am able to do.

_____

_____

_____

Which of the following are healthy activities? Circle all that apply.

a. Drinking alcohol to manage stress
b. Journaling
c. Taking a walk
d. Talking to a friend
e. Smoking

Smoking can make a person's chance of getting heart disease higher.

a. True
b. False

Answer Key

Which of the following are healthy activities? Circle all that apply.

a. Drinking alcohol to manage stress
b. Journaling
c. Taking a walk
d. Talking to a friend
e. Smoking

Smoking can make a person's chance of getting heart disease higher.

a. True
b. False

Secondary Stroke Prevention and Support: An Occupational Therapy Program
Participant Handout

Program Goal: The goal of this program is to help support people after a stroke and give them information and skills to manage health and live a healthy lifestyle to reduce the risk of having a stroke.

Session Goals:

- At the end of the group, I will know more about how alcohol and tobacco use can impact health.
- At the end of the group, I will know more about healthy activities.
- At the end of the group, I will make a list of at least 3 healthy activities to do in the future.

SESSION 7: Alcohol and Tobacco: Choosing Healthier Habits

What puts me at-risk for a stroke?

Lifestyle Habits that are modifiable risk factors for stroke

- Poor diet
- Limited exercise
- Smoking/tobacco use
- Alcohol use (Bartels et al., 2016; CDC, 2017b).

Today we are going to talk about alcohol and tobacco use

How does alcohol affect health?

- Makes it hard to use your brain to think and solve problems
- Makes a person feel unsteady
- Makes a person feel down (Teague, Mackenzie, & Rosenthal, 2009).

What are risks involved with drinking too much alcohol?

- Heart disease, stroke, liver disease, cancer, brain damage, weight gain/loss, mental health conditions, violence, being impulsive (Teague et al., 2009).
- Increase blood pressure (National Stroke Association, 2018).

Drinking in Moderation

- Men: two drinks per day or less
- Women: one drink per day or less

- “One drink is equal to:
    - 12 ounces of beer
    - 5 ounces of wine (1 glass)
    - 1 ¼ to 1 ½ ounces of liquor” (National Stroke Association, 2018, para.16).

What are Ways to Drink Less Alcohol?

- Put healthy drinks in the fridge such as milk, water, and juice.
- Purchase alcohol in small amounts, if at all (instead of buying a 6-pack of beer, purchase 1-2 bottles at a time)
- Drink water when drinking alcohol
- Learn how to say “no” (Teague et al., 2009).

*Ask your doctor for more information about limiting alcohol.

How does smoking affect health?

- Makes blood thick

- Blood vessels fill with plaque (National Stroke Association, 2018).

What-risks are involved with Smoking/Tobacco Use

- Stroke, cancer, COPD, heart and lung disease, and other health conditions (CDC, 2017a).

- A person who smokes is twice as likely to have a stroke (National Stroke Association, 2018).

- Smokeless tobacco products are also bad for one's health

Tips to Help Quit Smoking/Using Tobacco

- Create a smoke-free area, such as at home.

- Avoid being around others when they smoke

- Throw away tobacco and tobacco-related products, such as ashtrays

- Clean clothes, house, car to remove the smell of smoke

- Get teeth cleaned by a dentist
- Talk to a doctor about nicotine replacement products
- Buy healthy, low-calorie snacks to help with cravings
- Tell friends and family you are trying to quit (Teague et al., 2009).

*Ask a doctor for more information for help to quit smoking/using tobacco.

Homework:

Alcohol and Tobacco: Choosing Healthier Habits SMART Goal:

_____

_____

_____

_____

Before the next session, keep track of your progress toward this goal and the goals you set in the sessions before and write about your progress.

References

Bartels, M. N., Duffy, C. A., & Beland, H. E. (2016). Pathophysiology, medical management, and acute rehabilitation of stroke survivors. In G. Gillen (Ed.) *Stroke rehabilitation: A function-based approach* (4th ed.) (pp. 2-45). St. Louis, MO: Elsevier.

Centers for Disease Control and Prevention (2017a). *Smoking and tobacco use*. Retrieved from https://www.cdc.gov/tobacco/index.htm

Centers for Disease Control and Prevention. (2017b). *Stroke.* Retrieved from https://www.cdc.gov/stroke/index.htm

National Stroke Association. (2018). *Lifestyle risk factors.* Retrieved from http://www.stroke.org/understand-stroke/preventing-stroke/lifestyle-risk-factors

Teague, M. L., Mackenzie, S. L. C., & Rosenthal, D. M. (2009). *Your health today: Choices in a changing society* (2nd ed.). New York, NY: McGraw-Hill Companies, Inc.

Secondary Stroke Prevention and Support: An Occupational Therapy Program Facilitator's Guide

Program Objective: The objective of this program is to help provide support for individuals recovering from a stroke, as well as provide education and skills to enhance occupational engagement in health management and maintenance to reduce the risk of recurrent stroke, and improve quality of life.

Session Objectives:

- At the end of the session, participants will compare changes in volition and personal causation in regards to health management and maintenance throughout the Program.
- At the end of the session, participants will explain plans on how to continue to utilize self-management techniques in daily routines after the Program to prevent stroke recurrence. (habituation)
- At the end of the session, participants will describe the most significant self-management technique they learned from engagement in the Program.

Session 8: Stroke Prevention Conclusion/Wrap-up

Group Membership: A group of community dwelling individuals who have experienced a stroke, as well as their family members, or other supports (e.g. friends).

Session Structure:

Introduction

- Welcome group to the final session and review the objective of the *Secondary Stroke Prevention and Support: An Occupational Therapy Program*.
- Last session focused on tobacco and alcohol use and alternative healthy choices that can be incorporated into daily life. To review, we provided information about the impact of tobacco and alcohol use on health. We had the opportunity to engage in a healthy activity exploration game to identify various healthy activities. Have group members share if the activity helped them participate in more healthy activities within the past two weeks Have group members share their thoughts and feelings about the homework from Session 7. Encourage group members to share the progress they made toward the SMART goals they set in the previous sessions. Ask group members if anyone has any questions, comments, or feedback before beginning the concluding session.
- Warm-up: Group members will independently complete the pre-assessment or with assistance if needed.
- Expectations of the group
    - Be respectful of others and their personal experiences/challenges

    - Be actively engaged in the group process
    - We encourage you to ask questions and engage in discussion
- Objectives:
    - At the end of the session, participants will compare changes in volition and personal causation in regards to health management and maintenance throughout the Program.
    - At the end of the session, participants will explain plans on how to continue to utilize self-management techniques in daily routines after the Program to prevent stroke recurrence. (habituation)
    - At the end of the session, participants will describe the most significant self-management technique they learned from engagement in the Program.
- Brief outline: In today's group we will be reviewing the content and the group process from the previous seven sessions, and we will be engaging in a reflective activity followed by discussion.

Activity

Reflection: Group members will engage in a guided reflective activity to evaluate the meaning of the Program to them and the impact of the Program on their participation in health management and maintenance. A detailed description of the activity is attached.

Sharing

- Group members are encouraged to share their favorite activity from the Program.
- Encourage group members to share what they learned from this program.
- Encourage group members to share the session that has had the most impact on their daily life.
- Have group members share the progress they have made toward the SMART goals they have set throughout the Program.
- Encourage group members to share changes they have noticed in their daily habits/routines since starting this program.
- Encourage group members to give each other positive feedback regarding progress throughout program.

Processing

- How did you feel while completing the reflection worksheet?
- What feelings do you have regarding the termination of the group?
- What was the hardest part of the group?
- How confident do you feel about self-managing your health to prevent future strokes?
- What do you feel more confident doing after completing this program? (personal causation)

- How do you feel this program will help you use self-management skills in your daily life?
- How do you feel about continuing to use the skills you have learned in daily life after this program ends?
- How do you feel this group has improved your quality of life?
- Do you feel this program provided you with the support you needed through your stroke recovery process? If not, what additional support would have been/would be helpful?

Generalizing

- Prompt group members to identify key points from the Program.
- Highlight key points from each session (General stroke information, self-management skills, managing health, stress management, healthy eating habits, physical activity, and choosing healthy activities).
- Emphasize the importance of engaging in health management and maintenance to support health and prevent future strokes.

Application

- Have participants complete post-assessment and review answers.
- As you reflect on this process, what do you think the challenges might be in working towards current and future SMART goals?
- What will you do to continue working towards your SMART goals to promote a healthy lifestyle?

Summary

- Review objectives of this group and program objective and ask group members if they believe objectives have been met.
- Ask group members if there is any unfinished business or concerns.
- Thank group members for their participation in the *Secondary Stroke Prevention and Support: An Occupational Therapy Program* and praise group members for their participation and encourage group members to continue to participate in health management and maintenance.

Activity description: Group members will participate in a guided reflection to identify the impact of the sessions on their participation in health management and maintenance and the personal changes the sessions have helped them make to their habits and routines. Each group member will be given a reflection worksheet (attached) to facilitate self-reflection regarding the progress they have made toward self-management over the course of the Program. The group members will independently complete the worksheet prior to a group discussion.

The purpose of this activity is to provide participants an opportunity to explore their personal feelings regarding the Program and the impact of the Program on their life. This activity will promote therapeutic termination of the group (Cole, 2012). Through the activity, group members will be able to reflect on changes in volition, habituation, and performance capacity relative to participation in the occupation of health management and maintenance. Additionally, this activity will allow participants to identify changes in their occupational adaptation as a self-manager of one's health.

Supplies:

- Worksheet per participant
- Writing utensil per participant

"Reflection Worksheet" questions with link to MOHO included below:

In what ways has this program been valuable to you?

What was your favorite activity from the Program? What made it meaningful to you? (Volition)

What did you take from this program that made the biggest impact on your daily life?

How have your daily habits changed since beginning this program? (Habituation)

How has this program influenced your understanding and ability to engage in self-management techniques? (Performance capacity)

What do you feel more confident doing after completing this program? (Personal causation)

What will you do to continue working towards your SMART goals to promote a healthy lifestyle?

How competent do you feel in your role of managing your health? (Occupational identity and competence) (Kielhofner, 2008).

Reflection Worksheet

In what ways has this program been valuable/helpful to you?

What was your favorite activity from the Program? What made it meaningful to you?

What did you take from this program that made the biggest impact on your daily life?

How have your daily habits changed since beginning this program?

How has this program changed your understanding and ability to use self-management skills?

What do you feel more confident doing after finishing this program?

What will you do to continue working towards your SMART goals to promote a healthy lifestyle?

How capable do you feel in your role of being a self-manager of your health?