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The Aphasia Friendly Business Campaign

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By

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ABSTRACT

Aphasia is a language disorder that affects a person's ability to speak, read, write, or understand. The disorder is multi-faceted and symptoms vary greatly among individuals, but all forms create pervasive communication barriers that make participation in society difficult. There are well over 100,000 Canadians with aphasia, making this disorder more common than Parkinson's disease or muscular dystrophy, but unlike those disorders, very few people have heard of aphasia. On the ground, the consequences of this lack of knowledge is that Canadian businesses and organizations are ill-equipped to accommodate customers with this invisible disability.

The present study introduces The Aphasia Friendly Business Campaign (AFBC), which has been designed to address the lack of knowledge surrounding aphasia. This knowledge mobilization project assists businesses in increasing accessibility for people with communication disorders through business-specific training sessions. This thesis describes the AFBC and evaluates its efficacy. Fifteen participating organizations and their employees received AFBC training in which they were told what aphasia is and were taught how to use supportive communication strategies to facilitate conversation with people with aphasia. Pre-and post training questionnaires assessed changes in employees' declarative knowledge regarding aphasia and their perceived self-efficacy in the workplace. The responses revealed improved awareness and knowledge of aphasia, which translated into increased confidence in the employees' ability to offer adequate service to customers with aphasia. The increase in public awareness and knowledge regarding aphasia and the ability of local businesses to use supportive communication strategies has implications for increasing the autonomy of people with aphasia in our community.

ACKNOWLEDGMENTS

To my brilliant mentor, Dr. Lori Buchanan, a simple thank-you does not capture the magnitude of appreciation I have for guiding me and supporting me throughout this project. Your tenacity and passion for helping other people is inspiring and I am so grateful to have had the opportunity to facilitate such meaningful research with you.

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This thesis is dedicated to Michael Buchanan. The Aphasia Friendly Business Campaign is coming your way soon.

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CHAPTER 1.

INTRODUCTION AND REVIEW OF LITERATURE

1.1 Importance of Communication

Communication is essential in almost all aspects of one's life. It facilitates our interaction with other people, promotes autonomy in everyday life, allows people to express their feelings, supports success in academic, personal and professional life, and is fundamental to participation in society (Goldbart & Caton, 2010; Morreale, Osborn, & Pearson, 2000). There are different ways that we communicate that include writing, gesturing, and drawing; however, it is the ability to communicate verbally that is often regarded as the most essential (Goldbart & Caton, 2010; Mirenda & Mathy-Laikko, 1989; Morreale et al., 2000). For most adults, the ability to successfully articulate words and communicate orally occurs effortlessly. There are some instances, however, in which this effortless communication is compromised, eliciting devastating effects on interpersonal relationships, personal development, and access to community services (Brown et al., 2006; Dickey et al., 2010; Simmons-Mackie & Damico, 2007).

Communication breakdowns can occur as a result of both congenital and acquired neurogenic disorders. Speech and comprehension impairments are a common sequala of many disabilities, including cerebral palsy, autism spectrum disorder, Down Syndrome, developmental delays, learning and intellectual disabilities (Mirenda & Mathy-Laikko, 1989). Some individuals with congenital disabilities may have never developed sufficient speech as a means of communication, or if speech and language had developed, certain abnormalities such as repetitiveness, literalness of meaning, and idiosyncratic use of words may be noted (Mirenda & Mathy-Laikko, 1989). It estimated that approximately 9,000,000 individuals in the United States

and 440,000 people in Canada are non-speaking as a result of disability (Blackstone & Painter, 1985; CDAC, 2019; Mirenda & Mathy-Laikko, 1989).

In contrast, some individuals are not born with a disability that compromises their ability to communicate, but rather, acquire one through their lifetime. Dementia, Parkinson's disease, Amyotrophic Lateral Sclerosis (ALS), traumatic brain injury, or stroke are some examples of acquired neurogenic disorders that may impact an individual's ability to speak, understand, read and/or write (Orange, 2009). This impairment of a person's ability to process language is very broadly classified as a language disorder called aphasia.

1.2 Introduction to Aphasia

Aphasia is defined as a language disorder that affects a person's ability to speak, read, write, or understand (Dickey et al., 2010). It can arise from closed head injuries, cerebral tumours, or degenerative disorders but, is most frequently acquired as a result of stroke (Aphasia Access, 2017; Chapey, 1986). Stroke is defined by blockage or bleeding that interrupts blood flow to the brain, irrevocably damaging brain cells at an estimated 1.9 million cells per minute (Heart & Stroke, 2019; Kolb & Whishaw, 2009). The impact of this cellular death markedly varies from person to person, with factors such as type and location of stroke impacting outcomes. The most common type of stroke, an ischemic stroke, is often caused by a blockage in the middle cerebral artery (MCA; Levine, Dulli, Dixit, Hafeez & Khasru, 2003). The MCA supplies blood to a portion of the frontal lobe and the lateral surface of the temporal and parietal lobes (Levine et al., 2003). Unfortunately, these are the areas of the brain that are crucial to language production and comprehension. Consequently, some of the most common behavioural sequelae of stroke relate to problems with language production and/or comprehension (i.e, aphasia). Indeed, one in three stroke survivors is diagnosed with aphasia, with an estimated 165,000 to 380,000 Canadians

currently living with the language disorder (Aphasia Access, 2017). Further, it is anticipated that aphasia's prevalence will surge over the next twenty years. This is due to the fact that the number of Canadians living post-stroke is expected to nearly double with the aging Canadian population and the incidence of stroke occurring at younger age increasing (Heart & Stroke, 2017). It has been articulated that "the threat of stroke is urgent", a caution that can evidently be applied to aphasia as well (Heart & Stroke, 2017).

1.3 Variability in Aphasia

Aphasia can compromise communicative abilities at either language production, comprehension, or both (Code & Herrmann, 2003). One individual may have a mild form of impairment as indicated by word-finding difficulty, whereas someone else may have a significant global language impairment that restricts verbal expression entirely. An individual that has good comprehension of language but whose speech is characterized by the production of effortful words and short phrases is said to have Broca's, or non-fluent aphasia (Danly & Shapiro, 1982). Most people attribute the finding that language is lateralized to the left hemisphere of the brain to Paul Broca, and as such, the third gyrus of the left frontal lobe, is called Broca's area (Manning & Thomas-Antérion, 2011). Damage to this area of the brain is associated with impairments in language production, explaining the characteristic short and effortful speech of someone with this form of aphasia. For example, an individual with Broca's aphasia may say "book book two table" to express that there are two books on the table, or "walk dog" to indicate they would like to take the dog for a walk (NIDCD, 2017). This pattern of poor expressive language, but strengths in receptive language is in contrast to the language patterns seen in Wernicke's, or fluent aphasia.

Wernicke's aphasia is the most common form of fluent aphasia and often, but not always results following a stroke affecting Wernicke's area (Rapp & Caramazza,1997). This area of the brain is located in the left posterior temporal lobe and is largely responsible for the comprehension of speech (Levine et al., 2003). Individuals with Wernicke's aphasia have relative strengths in expressive language and speak in long, fluent, but content-less sentences. For example, when an individual with fluent aphasia was asked "what are you doing today?", he responded: "we stayed with the water over here at the moment and talk with the people for them over there. They're diving for them at the moment, but they'll save in moment for him, with luck" (Tactus Therapy, 2015, 0:16). Unfortunately, given their poor comprehension these individuals are often unaware that their speech does not make sense (Danly, Cooper, & Shapiro,1983).

The two general categories described above define the boundaries of aphasia, but the majority of people with aphasia do not fall neatly into such specific behavioural profiles (Rapp & Caramazza,1997). Some individuals present with sparse and effortful speech, resembling Broca's aphasia, but their comprehension of speech is limited, which is characteristic of Wernicke's aphasia. This type of aphasia is called mixed non-fluent aphasia (Aphasia Access, 2017). Further, some individuals experience the most severe type of aphasia, called global aphasia. It is caused by damage to multiple language-processing areas of the brain, including both Wernicke's and Broca's area (NAA, 1988). Consequently, these people can only produce a few recognizable words and understand very limited spoken language (Aphasia Access, 2017). Despite this barrier to language and speech, individuals with global aphasia, like in milder forms of aphasia, may still have fully preserved intellectual and cognitive capabilities (NAA, 1988). It is evident

however, that the impact of all forms of aphasia can create multi-faceted and complex challenges that make many aspects of life difficult for those affected.

1.4 Marginalization and Aphasia

The communication barriers faced by people with aphasia restricts their access to social settings, resources, and services (Brown et al., 2006; Simmons-Mackie & Damico, 2007). This social exclusion and consequent loss of autonomy negatively impacts people with aphasia's quality of life, and elicits emotional stress and psychosocial disturbance (Code, Hemsley & Herrmann, 1999). In fact, depression, occupational frustrations, and reduced involvement in everyday living and leisure activities are commonly comorbid with the language disorder (Code et al., 1999; Code et al., 2001; Code, 2003; Code & Herrmann, 2003).

People with aphasia are often hesitant to engage in conversations with service providers in the community due to common misconceptions about their condition, which include perceptions that they are under the influence of illicit substances or have low intellectual ability (Brown et al., 2006). In observations of community-based communication, Davidson and colleagues (2003) found that people with aphasia spent much less time communicating with shop assistants and tradespeople than did healthy same-aged controls. This finding quantifies the communal isolation that people with aphasia report and reflects a breakdown of accessibility at two-levels: the service provider and the environment (Simmons-Mackie & Damico, 2007; Threats, 2007).

Prominent environmental barriers to the accessibility of community services for people with aphasia have been categorized into: (1) people factors, (2) physical factors, and (3) business/organizational factors (Brown et al., 2006). These domains are highly interconnected and together contribute to society's inability to address the needs of people with aphasia. This

inability has particularly grave impacts on the social relationships and autonomy of this population. The focus of this thesis is precisely the alleviation of these barriers to accessibility.

As Brown and colleagues (2006) point out, one of the main roadblocks to accessibility that results in societal marginalization is the "people factor". Consistent with this notion is the fact that people with severe communication difficulties are commonly described by service providers as 'hard to reach' (Parr, 2007, p. 101). This societal marginalization of people with aphasia is exacerbated by a lack of public awareness of the disorder. Keeping in mind that the manner by which service providers initiate conversation with people with aphasia has the potential to "increase isolation and low self-esteem or consolidate inclusion and engagement" (Parr, 2007, p. 117), this barrier to may be alleviated by addressing the lack of awareness of aphasia to shop assistants and others in the community.

Aphasia is most familiar to people with a personal or occupational connection to the disorder (Code et al., 2016). Otherwise, the lack of awareness of aphasia seems almost universal. International studies examining public awareness and knowledge of aphasia consistently report extremely low levels of both. The results of these studies indicate that of participants surveyed in England, USA, and Australia only 10-18% had heard of aphasia and only 1.5-7.6% had basic knowledge of the condition (Code et al., 2001). People with aphasia in Canada fare slightly better. Awareness and knowledge of aphasia in 831 respondents from the Greater Toronto Area (GTA) of Ontario, Canada was 31.8% and 5.7%, respectively (Patterson et al., 2015), but these numbers are still too low to translate into meaningful changes in accessibility. Both globally and locally, despite its prevalence, aphasia is not well-known and does not garner much public attention.

This lack of public awareness and knowledge of aphasia is partially attributed to the absence of aphasia related coverage in the media and other public platforms (Code et al., 2016). Elman, Ogar, and Elman (2000) corroborated the notable absence of aphasia related coverage in the media through their examination of the frequency of the word "aphasia" in the top 50 US newspapers between 1994–1999. Results indicated "aphasia" was used significantly less frequently than other neurologically related conditions with lower prevalence rates, such as Parkinson's disease. Similar findings were reported in Sherratt's (2011) review of written media coverage of aphasia with results indicating information in the media is often inaccurate and vastly limited, with aphasia-related articles identified 27 times less frequently than Parkinson's disease.

The sparsity and inaccuracy of the public information regarding aphasia brings with it a corresponding lack of knowledge regarding supportive communication strategies (e.g., accessible written or pictorial information) that people with aphasia may require (Dalemans, De Witte, Beurskens, Van Den Heuvel, & Wade, 2010; Howe, Worrall, & Hickson, 2004). Further, the lack of awareness leads to public misunderstandings of the disorder and restricts people's ability to respond appropriately to people they might encounter with aphasia (Patterson et al., 2015; Sherratt, 2011).

Improvements to the incidence and accuracy of aphasia-related information in publicly available media would increase public awareness, presumably leading to increases in research, community support, and services that encourage an improved quality of life for people with aphasia (Baig, 2011; Elman et al., 2000; Patterson et al., 2015; Sherratt, 2011; Worrall et al., 2007). Although this approach might work, the benefits would take a long time to be realized. A more direct approach is to push out information to stakeholders in the community and support

their efforts to become aphasia-friendly, recognizing that researchers are calling for "[aphasia] awareness campaigns at both the community and the individual retail outlet level" (Brown et al., 2006) as a means to reduce the barriers to community participation.

1.5 Legalities and Accommodation

The assumption underlying this project was that if businesses knew about aphasia, they would do what they could to reduce the barriers to participation facing people with aphasia. This assumption is not Pollyanna-like; in fact, the obligation to accommodate people with aphasia is spelled out in the Accessibility for Ontarians with Disabilities Act (AODA). The rights of all residents (including those with communication deficits) to participate fully in society, regardless of disability, is ostensibly protected in the AODA passed in 2005, and the Accessibility Standard for Customer Service in 2008. Although meant to safeguard the rights of Ontarians that are marginalized by disability, these extensive and complex legal policies have not had the desired impact; Moran's (2014) Second Legislative Review of the AODA, 2005 reported a lack of accessibility improvements at the storefront level to accommodate people with non-visible disabilities, such as aphasia. In consulting with obligated sectors under the Accessibility Standard for Customer Service, Moran (2014) heard that businesses would comply with the legislation standards if they knew what was required. Both public and private sectors articulated difficulty understanding their obligations because "the standards are often not specific enough about what is required, there is a lack of support for education and implementation, and the training requirements under the standards consume too much time and effort" (Moran, 2014, p. 28). While the penalties for AODA non-compliance can be steep (up to $100, 0000), the reality is that lawsuits involving AODA violations are few and far between. To date, only a handful of cases with respect to AODA non-compliance have been filed, and those that have are generally

characterized as minor infractions with significantly reduced fines (i.e. $500 - $2000) (Saint-Cyr, 2017). As such, the onerous task of establishing and facilitating social reintegration of people with aphasia by making communities more accessible is frequently spearheaded by advocates and volunteers (Threats, 2007). This need for increased public awareness and the corresponding call for action in the literature to offer on-site accessibility training for obligated organizations under the AODA, therefore served as the impetus for this knowledge mobilization project: The Aphasia Friendly Business Campaign (AFBC).

1.6 AFBC Specifics

The AFBC assists businesses in providing barrier-free access to products and services for people with aphasia. This is achieved through an individualized and comprehensive workplace intervention program that educates employees of local organizations about aphasia. As this awareness training was created in partnership with healthcare professionals and modelled after clinically established programs, this collaborative initiative between researchers and community partners can be classified as community-based participatory research (CBPR; Roberts, 2013). As prescribed by the CBPR framework, a community identified need, in this case, to increase the overall access to community services for people with aphasia, is acknowledged, and a partnership between researchers and the community is formed to elicit a positive change. In determining both the community identified need, and a solution to said need, the 'voice of the community', including "those that have been silent or marginalized in the past", must be heard (Roberts, 2013, p. 3). Societal marginalization of people with aphasia has been exacerbated by community inaccessibility and unaccommodating customer service but can be ameliorated through community awareness training (Brown et al., 2006; Howe et al., 2004; Parr, 2007; Ranta, 2013). This process of creating aphasia-accessible environments is challenging because it

is effectively “changing cultures, institutions, ways of speaking and behaving that have perhaps been taken for granted for decades” (Parr, 2007, p. 117). However, with proper training and motivated personnel overcoming these challenges to elicit change is entirely feasible (Parr, 2007).

The educational content of the AFBC’s training was informed by the March of Dimes Canada’s teaching teams, more specifically by their Aphasia and Communication Disabilities Program (ACDP). The ACDP is comprised of a network of healthcare professionals including Speech Language Pathologists, Communicative Disorders Assistants, and Social Workers who offer community-based services, resources, and education to assist people with aphasia and their families adapt and integrate back into the community after stroke (March of Dimes Canada, 2017). Resources provided by the ACDP such as information regarding supportive communication strategies to facilitate a conversation with someone with aphasia were instrumental in formulating the curriculum for the AFBC training. These supportive communication strategies are endorsed as Canada’s best practices in stroke recovery and are used in a wide variety of settings to alleviate the communicative barriers caused by language deficit (March of Dimes Canada, 2017). The AFBC took this clinically relevant content and adapted it to the needs of individual businesses or organizations with the goal of creating aphasia-friendly environments in the community.

Recognizing that community participation and accessibility of services is largely influenced by front-line workers in businesses, it was important to emphasize to the participants of the AFBC training that the manner in which they communicate and attempt to understand customers, their resourcefulness, and their willingness to help dictates the extent to which they address the needs of their customers (Brown et al., 2006; Parr, 2007). The AFBC’s framework was carefully

constructed to promote the latter of the two options, facilitating the creation of an aphasia-friendly businesses by (1) educating service providers about the needs of people with aphasia, (2) encouraging a positive and accountable attitude towards individuals with the disorder, and (3) providing accessible reading materials for their use (Howe, et al., 2004; Parr, Byng & Gilpin, 1997).

1.7 Previous Educational Training/ Studies

Training programs like the AFBC have been shown to improve community access and the experience of community interaction for people with aphasia. For example, Baig (2011) offered an aphasia awareness training session for emergency responders that showed a significant post-training improvement in participant's ability to recognize and describe aphasia and to facilitate conversations with people with aphasia. Similarly, Ranta (2013) presented an enhanced aphasia awareness training session for first responders that included a guest speaker. Results also showed a significant post-training improvement in participant's knowledge of, and recognition of persons with aphasia. Togher, McDonald, Code, and Grant (2004) conducted a training program aimed at improving communicative skills of police officers during encounters with people with communication disabilities. Post-training results indicated participants had successfully learned strategies to alter their language in a way that made conversations more succinct and efficient.

These past studies corroborate the idea that educational training can alleviate communicative barriers, increase community awareness, and subsequently reduce social exclusion for people with aphasia. With that in mind, the current project modelled the Snyder Center for Aphasia Life Enhancement's "Aphasia Friendly" Business Campaign (McCall, 2011) and offered training to organizations and their employees in the community. The Snyder program evaluated the accessibility of seven local businesses in Baltimore, MD and subsequently trained a

representative from each business on aphasia (Polovoy, 2012). The current project extends this approach by training a larger sample of employees and examining the efficacy of our AFBC program, as the efficacy of the Baltimore based project was not assessed.

1.8 Program Evaluation

We designed the AFBC to be a comprehensive workplace intervention program that educates employees of local businesses about aphasia. Through individually tailored workshops and materials, we facilitate effective communication with persons with aphasia in trained businesses. This knowledge mobilization project followed the "Life Participation Approach to Aphasia's" (LPAA) core values and ideas for intervention (Duchan, Linda, Garcia, Lyon, & Simmons-Mackie, 2001). According to the LPAA's model, programs must be easily accessible, cost-effective, and create autonomous access to activities of choice with the primary goal of intervention being re-engagement in everyday society (Duchan et al., 2001). The AFBC's training program meets these criteria.

We are maximally accessible to organizations because we bring our training to them, we are cost-effective because our training is free, and we attempt to create autonomous access to activities of choice by offering our services to any interested organization. We have met these goals in the design of our study and have evaluated the program itself following the conceptual framework of the Centre for Disease Control's (CDC) steps and standards for program evaluation (see Figure 1; Milstein, Wetterhall & CDC Evaluation Working Group, 2000). This framework is considered the gold standard of program evaluations and is used by the CDC, American Evaluation Association, many other professional organizations (Milstein et al., 2000). It describes a systematic approach to navigating a program evaluation in six steps that are applicable to multiple fields of inquiry (e.g., medicine, education, workplace, etc.): (1) Engage

Stakeholders, (2) Focus the Evaluation Design, (3) Describe the Program, (4) Gather Credible Evidence, (5) Justify Conclusions, and (6) Ensure Use and Share Lessons Learned.

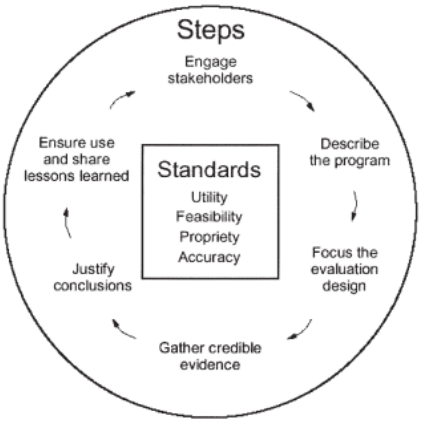

Figure 1. Framework for Program Evaluation

As per the framework, credible and relevant evidence must be collected to evaluate the project. Research conducted on the efficacy of workplace awareness training has primarily focused on courses in which declarative knowledge and training performance were the primary learning outcomes (Bell, Tannenbaum, Ford, Noe, & Kraiger, 2017; Kozlowski et al., 2001). With this in mind, each AFBC workshop was preceded and followed by questionnaires to probe participant's knowledge of aphasia and assess changes in declarative knowledge. This data was complemented by an examination of changes in attitude and behaviours as our questionnaires were also designed to assess broader perspectives of knowledge and skill adaptability, such as changes in affective and behavioral outcomes. Further, qualitative descriptions of pertinence and relevance of the training, and the self-perceived competency of participants in meeting the needs of clients with aphasia was assessed.

The content of a training module may be easily retained by a trainee; however, without a corresponding increase in the trainee's self-efficacy, the acquired knowledge and skills in

training may not be effectively applied (Tannenbaum, Mathieu, Salas, & Cannon-Bowers, 1991). Self-efficacy, or the belief in one's capability to perform a specific task (Bandura,1977), relates to task performance in a variety of complex settings (Gist, Schwoerer, & Rosen, 1989; Kozlowski et al., 2001), such as the trainee's work environments. The AFBC evaluation therefore included include both a pre-and post-training occupational self-efficacy measure. Improvements in post-training self-efficacy have been noted to increase successful training transfer (Tannenbaum et al., 1991) and we hoped to see such improvements in the AFBC trainees. The training and questionnaires were modified to directly test this hypothesis. The goal of the current study was to increase awareness of aphasia in businesses and organizations and to test the efficacy of our approach. The following questions were explored:

1) Does on-site accessibility training about aphasia and supportive communication strategies increase employee's knowledge of aphasia?
2) Do employees report increased self-efficacy in interacting with a customer with aphasia after participating in an on-site targeted training on supportive communication strategies?

CHAPTER 2.

METHODOLOGY

2.1 Recruitment and Participants

A total of 226 employees across 15 organizations, including industries such as food and beverage, healthcare, and recreation services, participated in the University of Windsor's Research Ethics Board (REB) approved AFBC training (see Table 1 for a comprehensive list). Recruitment occurred through word of mouth and networking to establish initial contact. Upon successful contact, a standardized script was emailed to business managers (see Appendix A) and they were referred to the project website (*aphasiafriendlycanada.ca*). Businesses were eligible to participate if they were covered by the Accessibility Standards for Customer Service, which applies to every designated public-sector organization and to every person or organization that provides goods or services to members of the public that has at least one employee in Ontario (Government of Ontario, 2018).The AFBC training was made available to all employees of a participating business; however, only those who were 18 years and older, and returned the pre- and post-test questionnaires were included in the statistical analysis ($N = 175$). Participants consisted of 122 females and 53 males with a mean age of 29.91, $SD = 11.56$.

An amendment was made to the questionnaires to include Schyns and von Collani's (2002) Occupational Self-Efficacy Scale after a large portion of trainees had completed the training. At this time, only 40 participants provided complete self-efficacy data, but it is anticipated that the AFBC will continue and this sample size will increase (See Figure 1 for participant flow).

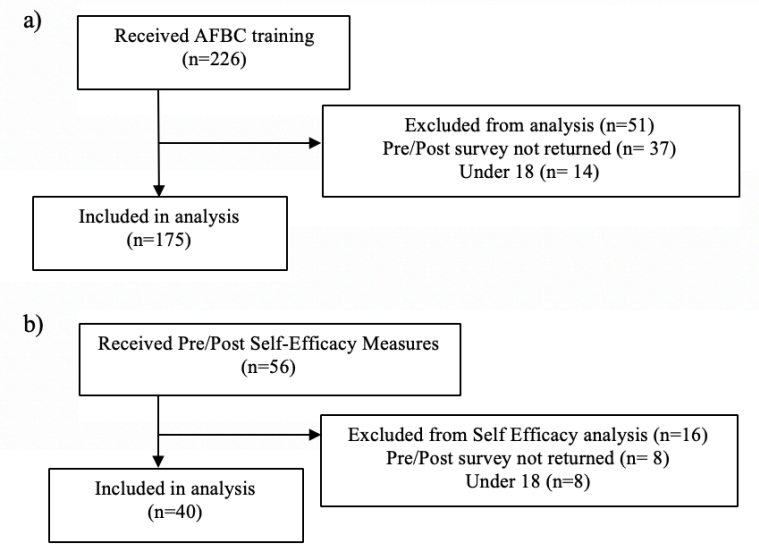

Figure 1. Participant Logistics

2.2 Training Procedure

Businesses and organizations were offered on-site aphasia training and personalized toolkits/resources we designed to accommodate the needs of people with communication disorders. Participating businesses and their respective employees received an on-site training session that was 60 minutes in length. The session was presented by a clinical neuropsychology graduate student who had been trained in facilitating supported conversations by the Aphasia Institute and had collaborated with many Speech Language Pathologists to ensure the descriptions of supported conversation techniques were accurate. The training session included a PowerPoint presentation, video examples, activity-based role-play, and an opportunity for discussion and questions. Information brochures, toolkits, and aphasia awareness stickers were also distributed for participants to examine.

PowerPoint. The PowerPoint was adapted from presentations used by March of Dimes (2017) and the Aphasia Institute (2015). With permission from these institutions, some original slides/content were used, with additional information added to fit the needs of each individual organization (See Appendix B).

Video Examples. Video footage retrieved from members of the Windsor community who have aphasia were incorporated into the PowerPoint presentation. Two middle-aged men with non-fluent aphasia volunteered to be recorded for the purpose of this project. They introduced themselves and provided insight on how aphasia impacts their day-to-day functioning.

Toolkits and Resources. Toolkits were designed and personalized for each participating organization. These toolkits displayed the services that were provided at the organization pictorially (See Appendix C). In addition to the toolkits, YES/NO and alphabet cards were left behind at each organization for their subsequent use (See Appendix D).

Role-Play. Participants were asked to form groups at the conclusion of training for an interactive role-playing activity. They were asked to use the personalized toolkits and supportive communication techniques to simulate an interaction with a customer with aphasia.

Awareness Stickers. Businesses were also provided with aphasia awareness stickers to advertise themselves as an 'aphasia-friendly environment'

2.3 Testing Measures

Training was preceded and followed by questionnaires to probe participant's knowledge of aphasia and assess changes in declarative knowledge and perceived self-efficacy. Employees were assured that the completion of the pre-and post-training questionnaires was voluntary and that their participation would not impact their work situation.

Participant's change in declarative knowledge of aphasia was evaluated by administering pre- and post-tests that included adapted versions of "The Aphasia Quiz". The Aphasia Quiz was developed by the National Aphasia Association (1988) and although there are no psychometric properties of the measure available, it has been used in other studies to measure pre- and post-training knowledge of aphasia (Baig, 2011; Ganzfried & Symbolik, 2011; Ranta, 2013). The

original version of the quiz consisted of ten true/false questions; however, the adapted version used in the current study contained an additional question and a "don't know" category of selection. The "don't know" option was added to gauge the baseline knowledge of participants by preventing random selection. This addition was informed by Baig (2011), whose pilot data found the option provided a more accurate measure of the participants initial and acquired knowledge of aphasia.

The statement, "*If a person has difficulty with speech, it also means they have intellectual deficiencies*", was also included in the AFBC questionnaires. The National Aphasia Association used this true/false statement in a survey they conducted in 2016 to emphasize that aphasia affects speech and language but not intellectual capabilities. As such, it was included in the present study to further disseminate education about misconceptions about aphasia.

To assess changes in perceived self- efficacy, participants in the latter portion of data collection (n = 56) were asked to complete a modified, short version of Schyns and von Collani's (2002) Occupational Self-Efficacy Scale prior-to and after the training. The original scale consisted of 20 items derived from various measures of general self-efficacy; however, Rigotti, Schyns and Mohr (2008) created a shorter version comprised of six items from the original scale. These six questions were preceded by a prompt which was added informing participants to consider the questions in regard to communication and service in their workplace. The items were rated on a scale ranging from 1 (strongly disagree) to 5 (strongly agree) with higher values corresponding to higher occupational self-efficacy. Reliability coefficients for the short version of the Occupational Self-Efficacy Scale are between .85 and .90 and support a good internal consistency of the scale (Rigotti et al., 2008).

The AFBC's pre-test also contained questions from Dr. Chris Code's "Awareness of Aphasia Survey" which has been extensively used to gauge aphasia awareness around the world (Chazhikat, 2014; Code et al., 2001; Code et al., 2016; Patterson et al., 2015; Simmons-Mackie, Code, Armstrong, Stiegler, & Elman, 2002). The questions used in the AFBC probed participant's general awareness and knowledge of stroke and provided categories for an individual to identify what type of disorder aphasia is, if they had endorsed that they were aware of it (e.g. aphasia is a: heart, circulatory, language, or spinal condition)

The post-test allowed participants to evaluate the quality and pertinence of the training using a 5-point Likert scale (1=poor, 5=excellent) (e.g. the training session was useful in my job). This evaluation was informed by the March of Dime's educational program feedback forms (March of Dimes Canada, 2009). Further, respondents could provide recommendations regarding implementation of the "aphasia-friendly" techniques in their workplace and offer suggestions on how to improve the training. (See Appendix E, F for pre/post-tests, respectively)

CHAPTER 3.

RESULTS

3.1 Data Analysis

Changes in declarative knowledge and perceived self-efficacy were compared using t-tests for paired samples. Additional data obtained from exit surveys was summarized and described qualitatively. Prior to conducting these analyses, a missing values analysis was conducted, and statistical assumptions were assessed.

When deciding how to effectively handle missing data, knowledge of the selectivity of missing data was important to consider. Examination of the unpaired observations ($N = 37$) in the current study identified that 51.4% ($n = 19$) of the missing data came from the same two organizations[1]. This clustering of missing data does not appear to be at random and imputing all missing values (e.g. entire pre or post-test) may have biased the results (Eekhout, de Boer, Twisk, de Vet, & Heymans, 2012; Sterne et al., 2009). Further, several reviews of missing data methods in pre/ post-test studies have observed that complete-case analyses (i.e. deletion of unpaired observations) are one of the most frequently used techniques to handle missing data and is often the default for statistical software (Eekhout et al., 2012; Guo & Yuan, 2017). As such, only paired observations were used in the present study. Even with the discarded data, the sample size of the present study remained moderately large ($N = 175$).

3.2 Pre-Training and 'Aphasia Quiz' Findings

The pre-training ($M = 6.23$, $SD = 2.91$) and post-training ($M = 9.15$, $SD = 1.52$) aphasia test scores were calculated and a paired samples t-test revealed that participant's knowledge of aphasia significantly improved after training; $t\ (174) = -13.56$, $p<.001$. The assumption of

[1]Velocity Law participants were unable to complete post-tests due to time constraints and The Down Town Mission participants considered themselves vulnerable population

normality was considered satisfied, as the skew and kurtosis levels were estimated at -0.458 and -0.809, respectively, which are considered acceptable values for a t-test (i.e. skew > |2| and kurtosis > |3|) (Cohen et al., 2014). Further, a large effect size was noted with Cohen's d estimated at -1.02 (Cohen et al., 2014).

On the pre-training quiz, 98.3% (n =172) participants reported having heard of stroke and 55.4% (n = 97) indicated they had heard of aphasia prior to training. Of those that noted they were aware of aphasia, 82.5% (n = 80) were correctly able to identify that it was a language disorder, while others indicated that it was a heart condition (4.1%, n = 4), they were unsure of what it was (3.1%, n = 3), or implied it was a condition not listed (e.g., it was not a heart, circulatory, language, or spinal condition) (10.3%, n = 10). Given the numbers reported in the introduction, this group was more knowledgeable than populations surveyed in other studies.

3.3 Self-Efficacy Findings

To investigate the differences in employee's overall perceived pre-training (M = 4.44, SD = .45) and post-training occupational self-efficacy (M = 4.58, SD = .43), a paired samples t-test was performed. Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was considered satisfied, as the skew and kurtosis levels were estimated at -.36 and 1.54, respectively, which is less than the acceptable values for a t-test (i.e. skew > |2| and kurtosis > |3|) (Cohen et al., 2014). Further, a correlation between pre-and post-conditions of r = .732, p< .01 suggests a dependant samples t-test was an appropriate fit.

Despite the comparatively smaller sample size in this analysis, results indicated participants reported significantly higher levels of self-efficacy regarding use of supportive communication strategies after training, $t(39) = -2.672$, $p<.05$, compared to baseline reports

collected prior to training. Cohen's d was estimated at -.423, which is approximately a medium effect size (Cohen et al., 2014).

3.4 Exit Survey Findings

The post-training survey asked participants to rate the pertinence and relevance of the training, as well as indicate their self-perceived competency in meeting the needs of clients with aphasia on a scale of 1 to 5 (1- strongly disagree, 5-strongly agree). With a cumulative score of 4.41/5 the participants (N = 175) agreed that the training adequately prepared them to work with people with aphasia or other communication disorders. Further, 88% of participants strongly agreed (n = 111) or agreed (n = 43) the training session was useful in their job, and with a cumulative rating of 4.49/5, they agreed the materials were adequate and helpful.

Additionally, participants were asked to offer suggestions on how service providers and businesses can become more "aphasia-friendly". Seventy-two percent of participants (n = 126) responded and shared sentiments about how to increase accessibility in their workplace. The most common responses indicated increasing signage (e.g., "we will be providing visuals at front desk, "use visual aids"), disseminating education (e.g., "train staff, "share knowledge") and having front-line workers use the strategies taught in AFBC training (e.g., "asked closed ended questions", "be patient", "use toolkits").

The exit survey also provided an open-ended question about ways to improve the training or share any other comments or feedback. Many participants provided general positive comments regarding the effectiveness of the training. 14.2% of participants (n = 25) provided suggestions for ways to improve the program. Some common suggestions were to have a guest speaker, provide brochures with the PowerPoint on it, to discuss other effects of stroke, have resources for participants to take home, and include more information about how to make e-services "aphasia-friendly".

Table 1.
Participating Businesses Aphasia Quiz Scores

Participating Business (*n included*)	Age Mean (*SD*)	Pre-Score Mean (*SD*)	Post-Score Mean (*SD*)
Parkway Dentistry (*2*)	30.33 (*2.31*)	8.50 (*2.12*)	9.50 (*2.12*)
Regency Park Nursing Home (*11)*	38.5 (*11.81*)	7.36 (*2.20*)	9.25 (*1.09*)
Harrowood Retirement Home (*1*)	27	10.00	10.00
Hotel-Dieu Grace Health Care (*16*)	36.47(*10.56*)	9.13 (1.*63*)	10.00 (1.*10*)
St. Clair College: Students in Health Care (*19*)	27 (*9.30*)	7.79 (*2.04*)	9.11 (*1.45*)
EYES Optometry (*1*)	28	8.00	11.00
Shopper's Drug Mart: Manning Location (*3*)	35.66 (*2.88*)	5.00 (3.*61*)	8.67 (*2.08*)
The Downtown Mission (*24*)	36.48 (*13.34*)	4.75 (3.*19*)	8.50 (*1.88*)
City of Windsor: City Hall Employees (*14*)	41.86 (10.90)	5.71(2.*26*)	9.57 (*.76*)
**Velocity Law Firm	45.75 (*10.85*)	8.25 (2.*49*)	N/A
Orwell Public House (*1*)	29	6.00	8.00
Lakeshore Cinemas (*14*)	20.93 (*3.69*)	6.19 (2.*59*)	8.29 (*1.49*)
15 Tim Horton's Franchises in Windsor (55)	26.41 (*9.02*)	4.88 (3.*12*)	9.09 (*1.72*)
City of Burlington: Parks & Recreation (*10*)	19.18 (*1.54*)	7.00 (2.*62*)	10.10 (*.88*)
Windsor YMCA (*4*)	35.5 (*15.11*)	6.50 (*.58*)	7.75 (*2.22*)

* All pre/post scores are an average out of 11
**Due to time constraints, participants only completed pre-test

Table 2.
Participating Businesses Overall Self-Efficacy Ratings

Participating Business (*n included*)	Age Mean (*SD*)	Pre-Score Mean (*SD*)	Post-Score Mean (*SD*)
Lakeshore Cinemas (*11*)	20.93 (*3.69*)	4.74 (*.48*)	4.80 *(.31*)
Hotel-Dieu Grace Health Care (*15*)	36.47(*10.56*)	4.38 (*.35*)	4.59 (*.45*)
City of Windsor: City Hall Employees (*14*)	41.86 (10.90)	4.26 (*.40*)	4.39 (*.39*)

*All pre/post scores are an average out of 5

CHAPTER 4.

DISCUSSION

4.1 General Discussion

The primary aim of the present study was to investigate the efficacy of the AFBC training program. The focus of the investigation was to test two hypotheses in a pre-/post-design on a sample of employees from various organizations. It was hypothesized that following the AFBC training, (1) employees would show significant improvements in their knowledge of aphasia and; (2) participants would show improvements in their perceived self-efficacy in the workplace. In accordance with the hypothesis that participants would show improvements in declarative knowledge of aphasia from the beginning to the end of training, statistically (p values ≤ .05) and meaningful (effect size > .20) improvements in test performance were observed. This outcome is consistent with previous findings that showed marked improvements with the same outcome variable following training (Baig, 2011; Ganzfried & Symbolik, 2011; Togher et al., 2004; Ranta, 2013).

The marked improvement in aphasia knowledge following the AFBC training corroborates the growing body of literature calling for awareness campaigns and training programs to impart knowledge of aphasia and increase the recognition and understanding of the language disorder (Brown et al., 2006; Patterson, 2015; Simmons-Mackie et al., 2002; Simmons-Mackie & Damico, 2007). These results are encouraging; as discussed above, increased awareness and knowledge of the disorder has many benefits. Funding for services, programs, and research is largely influenced by the public's awareness of the disorder (Simmons-Mackie et al., 2002). Further, improved public understanding of aphasia should reduce stigma surrounding the disorder (i.e. impaired or lacking intellect; Brown et al., 2006), and facilitate community re-

integration (Worrall et al., 2007). This increased knowledge also improves the quality of services provided for people with aphasia. Service providers with knowledge of the disorder can better facilitate communication and make appropriate accommodations to assist with vocational, social and, community reintegration (Simmons-Mackie et al., 2002; Threats, 2017).

The AFBC has imparted knowledge of aphasia to service providers and our results indicate these employees feel comfortable and confident using this knowledge to facilitate communication with people with aphasia. In accordance with the hypothesis that participants would show improvements in overall occupational self-efficacy from the start to the end of a training session, statistically (p values $\leq .05$) and meaningful (effect size $> .20$) improvements in ratings were observed. As self-efficacy is related to the likelihood that individuals will use new techniques acquired in training (Gist et al.,1989; Tannenbaum et al., 1991), our results are encouraging in terms the transfer-of-training process. Gist and colleagues (1989) emphasize that despite a trainee's ability to acquire knowledge or skills in training, a low self-efficacy perception may hinder the individual from applying the learned skills into their workplace. The increase in overall ratings of occupational self- efficacy, alongside the scores indicating trainees feel prepared to respond and communicate effectively using supportive communication strategies, suggest the AFBC may have facilitated a successful transfer-of-training to workplace.

Increases in reported self-efficacy following a training program have also been attributed to a trainee's perception of high training fulfillment (Tannenbaum et al., 1991). Individuals start a training program with varying expectations, and the extent to which these expectations are met at the conclusion of training has been coined 'training fulfillment' (Tannenbaum et al., 1991). When training fulfillment is low, the training failed to meet trainees' expectations and undesirable outcomes such as "negative attitude change, poor training reactions, and failure to

complete training" may be noted (Tannenbaum et al., 1991, p. 760). On the other hand, when there is a high training fulfillment, trainees often demonstrate significant improvements in their level of organizational commitment and self-efficacy (Tannenbaum et al., 1991). The results of the AFBC are consistent with this literature. Marked improvements in self-efficacy ratings were observed following the training, which as indicated by trainees strongly agreeing the AFBC adequately prepared them to work with people with aphasia or other communication disorders, provided high training fulfillment.

4.2 Sample Characteristics

As described above, the increase in both knowledge of aphasia and self-efficacy of the trainees has promising implications for the nearly 2000 residents in our Windsor-Essex community who are living with aphasia (Hill, 2017). In demonstrating their knowledge of aphasia, and describing how to utilize communication strategies to make organizations more accessible for people with aphasia, the characteristics of trainees who were aware and knowledgeable about the language disorder revealed some interesting patterns of response.

As previous literature emphasizes that the general public has a low baseline knowledge about aphasia (Chazhikat, 2014; Code et al., 2001; Code et al., 2016; Patterson et al., 2015; Simmons-Mackie et al., 2002), the current sample of participants were largely more knowledgeable about aphasia prior to training than anticipated. Familiarity through the workplace might account for our findings. Consistent with literature suggesting people working in occupations in the field of healthcare and science tend to be more aware of aphasia (Patterson, 2015; Simmons-Mackie et al., 2002), our sample was comprised of many trainees who work or study in these fields (e.g. Hotel-Dieu Grace Health Care, St. Clair College: Students in Health Care, EYES Optometry). Further, as Simmons-Mackie et al. (2002) points out, aphasia is more

prevalent in the older population. With the current sample consisting of trainees employed by two retirement homes, these individuals may have a higher exposure to people with aphasia as compared to other occupations. While our results indicate that many individuals were correctly able to identify that aphasia was a language disorder, several likened it to heart condition or were unaware of what the disorder was, although they indicated they had heard of it before. It is suggested, therefore, that awareness campaigns like the AFBC continue to educate and provide accurate information to a broader scope of people.

4.3 Program Evaluation

To evaluate and disseminate knowledge about the AFBC program itself, we can look to the step-wise program evaluation standards that the AFBC modeled (Milstein et al., 2000). As per the framework, we've engaged stakeholders and described the mission and objectives of the program to interested organizations on our website (www.aphasiafriendlycanada.ca). The evaluation design of the program was focused when we considered the AFBC's purpose, its users, and research questions to be explored. The addition of the self-efficacy measures following the start of data collection did not require any procedural changes to the program itself and as such, the next step of conducting the program evaluation, gather credible evidence, could be explored. Our empirical and justifiable evidence and compilation of answers from the open-ended questions indicate that the AFBC has increased trainee's knowledge of aphasia and comfort using supportive communication techniques. The next step in the program evaluation, *to ensure use and share lessons learned* (Milstein et al., 2000) is one that the AFBC has begun by providing feedback to stakeholders and participants, but needs further dissemination through continuation of the program in both our community and other places.

4.4 Limitations and Future Directions

Based on our acquired knowledge, we have demonstrated that it is possible to provide communicative training that increases employee's awareness of aphasia and self-efficacy to enable community participation for people with aphasia. This research is quite promising, but more needs to be accomplished as the limitations to the study are considered.

Recruiting adequate and representative samples is a major challenge in many research studies involving collaboration with human participants (U.S. Department of Health & Human Services, 2012), and the AFBC recruitment was no anomaly. Keeping in mind that the two main goals of recruitment are to recruit a sample that adequately represents the population (Patel, Doku, & Tennakoon, 2003) and to recruit sufficient participants to meet the sample size and power requirements of the study (Hulley et al., 2001; Keith, 2000), the AFBC was only able to achieve the latter goal. Recruitment proved to be a challenging and time-consuming process, with many organizations expressing regret about the inability to participate due to financial or logistical purposes (e.g. compensating employees for their time or finding a training time). Healthcare-related organizations tended to be the most interested in participating in the training, and as such, the current sample of participants largely consists of healthcare related workers whose awareness of aphasia prior to training may not reflect the general public's knowledge, as indicated by previous literature (i.e. Code et al., 2001; Patterson et al., 2015). As such, the representativeness of the current sample of participants may limit generalization of results. Moving forward, the AFBC will model a step-wise recruitment framework similar to the framework constructed by Foster et al. (2011), as it offers the opportunity to record the number of participants engaged at each stage and action. Particularly, these recordings facilitate comparison between participating businesses and those that did not to participate (i.e., what stage

in the recruitment process businesses chose not to participate) and moreover, they enable the calculation of adoption rates (i.e., the proportion of organizations that chose to participate in the study). Future research could involve examining the effectiveness of online aphasia business-specific modules to broaden the geographic reach of the training and alleviate some of the logistical and financial barriers faced in the present study.

While a sufficient sample size was recruited, the variability of employee participation across organizations and the number of organizations that participated limited the statistical analyses' that could be conducted.When considering a multilevel model, Kreft and de Leeuw (1998) emphasize that to see cross-level interactions, you should aim to have more than 20 groups, and group sizes should not be 'too small'. Maas, & Hox (2005) expand on group size, advising small sample size (50 or less) leads to biased estimates of the second-level standard errors. The current sample had a total of fifteen groups (organizations), with wide variability in group size (e.g. 1 - 65 participants). As such, a multilevel model would not be conducive, and a more robust analysis was used to analyze the preliminary results regarding the efficacy of the current training strategies. These results may inform training to enable future teams to model an empirically based plan for mobilizing the AFBC in their community.

The increase in public awareness and knowledge regarding aphasia and the perceived ability of local employees to use supportive communication strategies have set the stage for increasing the autonomy of people with aphasia in our community. Future research should consider assessing longitudinal factors related to training retention and transfer (i.e., do employees remember and use these skills on the job and do they teach new employees). Having individuals with aphasia and trained volunteers perform walk-in assessments of AFBC trained organizations to adjudicate the accessibility of the materials provided at the location, and the

communicative techniques used by the employees (e.g. used closed ended questions, used visual aids, spoke with clear and slow speech) would provide such insight.

4.5 Knowledge Translation

The City of Windsor's population is made up of seniors, with a total of 17.2 percent of its population being people who are 80-100 years or older (CBC, 2017). As such, it has a hospitalization rate of stroke victims that is 23 percent higher than the provincial rate (Cross, 2017). This translates into a need for community outreach and reintegration programs for stroke survivors, as we know that when an individual acquires aphasia, they struggle to reintegrate themselves back into their social and community networks (Code et al., 1999; Parr, 2007). Reintegration is a significant step, and as mentioned previously many people struggle to do so (Code & Herrmann, 2003). The AFBC program fills this void in our community and we can see the extent to which our training program is improving lives. We have witnessed people with aphasia interacting with AFBC trained staff at a day trip to a pool, seen individuals who struggled to communicate their preference for drink at a coffee shop now able to request a medium double-double, and have been contacted by organizations all around the world emphasizing the importance of this project. A poet with aphasia, Mr. Derek Cummins, contacted us from Ireland and shared this poem entitled, 'Someone Has Robbed My Thoughts':

I am fed up being tongue tied
Surely it must be time to be untied
To undo the knots around my rope.
Yesterday I wanted to just say 'thumb'
But the words falling from my mouth was 'Dumb' !!!
& in this conversation, they said 'what'?
Some didn't fully know or notice
Someone said "it is grand"
"He has a little issue …"
"Oh god this is more than being understood"
All I hoped to say to be sociable,
To be heard to communicate.
Then physically the sickness in my bowel,
Had now taken over.
Half smiles looked uncomfortable,
"Forget about it, it really is not that important"
But Christ it was it is,

"This is an abominable to me" !!!
"Someone has robbed me, of my thoughts"
"You have aborted me"
"Before I could keep a flow"
"To have spoken and be heard"

And now deep inside I fall Lower.
Soon my vocal voice will become a whisper,
That these once firm confident abilities,
Will waver to silence,
To hide in my shadows.
So I plead to myself, please don't Stop,

Please search for my surface, *And destroy my words.*
Don't just gobble me up,

-Derek Cummins, 2018

The AFBC is only beginning to scratch the surface of increasing accessibility for people with aphasia, but as Mr. Cummins urges, we are striving to not let people with aphasia's voice 'become a whisper' or 'let them hide in the shadows'. Threats (2017, p. 76) advises that we, researchers in communication disorders, have to be careful "not to search for intervention only where we are most comfortable looking". The AFBC embodies this and offers an innovative research program that is assisting those in the Windsor-Essex community to 'undo their knots' and have their voices heard again in our community. People with communication disorders in many other regions in Canada continue to find their problems to be misunderstood and unaddressed by extant services, and as such, the need for the expansion of the AFBC program is necessary.

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APPENDICES

Appendix A: Script for contacting prospective AFBC participants

To Whom It May Concern:

Greetings from Dr. Lori Buchanan's Cognitive Neuropsychology Laboratory at the University of Windsor in collaboration with the March of Dimes. We would like to invite you to participate in an opportunity to increase your business while supporting people with aphasia in our community.

Aphasia is a language disorder that affects a person's ability to speak, read, write or understand, but it does not affect intelligence or memory. Aphasia does not discriminate; it can affect people of any age or gender, socioeconomic status or educational level. Although aphasia is persistent in an estimated 35% of stroke survivors, most people have never heard of it. By the very nature of the condition, it is difficult for people with aphasia to advocate for themselves. They are dependent on organizations like clinical neuropsychologists and speech pathologists to educate others about their needs and to advocate for their rights and access to services.

We are therefore launching an Aphasia Friendly Business campaign to increase public awareness of the disability. The goal for this project is to increase the accessibility of public services to people with aphasia by educating, training, accrediting and endorsing local businesses as "Aphasia Friendly". Please read more in the attached document about how your business can benefit by participating in this project, and how your business can get involved. Thank you for your consideration and we are hopeful for a potential partner in our mission to deliver services that meet the needs of people affected by aphasia.

Sincerely,

Julia Borsatto
Associate Director of the Aphasia Friendly Business Campaign
borsatt@uwindsor.ca

Your business will benefit by participating in the Aphasia Friendly Business Campaign by:

- Receiving local attention for joining our efforts
- Receiving recognition as an "Aphasia Friendly" business in the community, including being listed on a registry of Aphasia Friendly businesses. This registry will be provided to local health care providers, including speech pathologist, and clinical neuropsychologists for their distribution to their patients
- Expanding access to services at your business for people with disabilities
- Being awarded an "Aphasia Friendly" business decal to display

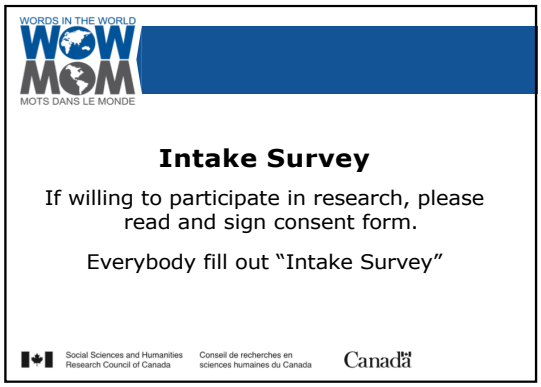
Your business can become an "Aphasia Friendly" business by:

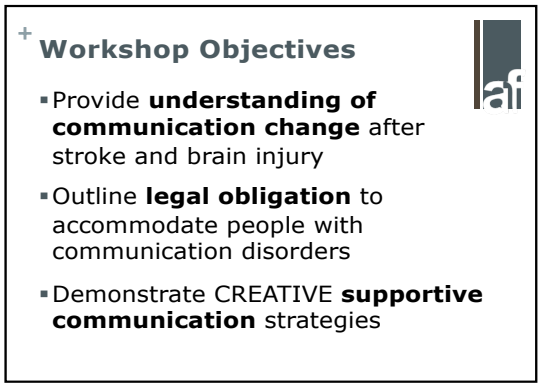
1. Allowing Dr. Lori Buchanan and her Clinical Neuropsychology Honours students to survey your business for accessibility of reading material (such as signs, instructions or menus), and employee knowledge of aphasia and ways to facilitate communication
2. Having representatives/ employees from your business take the 'Awareness of Aphasia' survey and participate in a one-hour on-site training about aphasia
3. Reviewing recommendations regarding how to make your business more accessible to Aphasics (implementations of recommended changes is optional)
4. Celebrating recognition as an "Aphasia Friendly" business

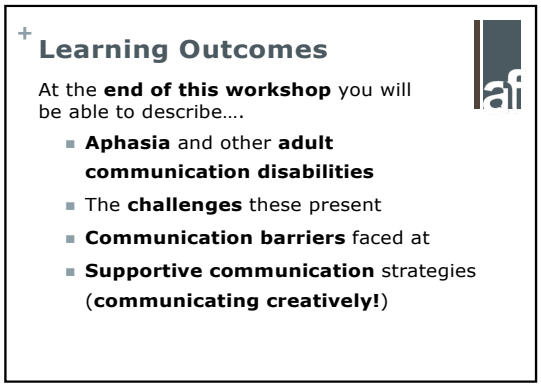
The proposed timeline for the Aphasia Friendly business campaign is:

1. Complete the site evaluation & administer a brief 'Awareness of Aphasia' survey to employees
2. Review recommendations with the business owner/manager
3. Complete the Aphasia awareness training module
4. Complete a brief post-training survey with business employees
5. Implement any desired changes to the business; and obtain recognition as an "Aphasia Friendly"

Appendix B: Sample Training Content







Our challenges include:

- Getting the **message in** (**through listening or reading**) – Receptive aphasia
- Getting the **message out** (through **speaking or writing**) – Expressive aphasia
- May only have receptive OR expressive aphasia OR may have BOTH.

Communication changes affect...

1. Well-being
2. Self-confidence
3. Conversation effectiveness
4. Family roles and relationships
5. Social connections

What are your personal or professional experiences with someone with aphasia or a communication disorder?

What barriers would someone with aphasia face as a customer at Tim Hortons?

Quotes recreated from survey of 12 people with aphasia about barriers to ordering at Tim Hortons

"Not enough **time** to respond when ordering in a car/can't communicate well verbally/time pressure"

"Need to have a **visual**/printed way of ordering (e.g., printed/picture menu to point to since it is hard to point to large board on the wall)"

"**Lack of understanding** of aphasia, so sometimes treated as if *stupid*"

The Legislative Framework

AODA

In 2005, the **Government of Ontario passed** the **Accessibility for Ontarians with Disabilities Act (AODA)**

- Accessibility Standards for Customer Service (2008)
- Everyone with disabilities has the right to access goods and services

Second Legislative Review of the Accessibility for Ontarians with Disabilities Act, 2005 (Moran, 2014)

Despite the Customer Service standards, **many people with disabilities** reported **personal issues** with **access to goods** and **services**

*"AODA has **not been effective** in addressing **non-visible disabilities**."*

Supportive Communication Strategies

=

Communication Access (AODA)

Canadian best practice standard in **Stroke Recovery**

COMMUNICATION ACCESS

What are supportive communication strategies?

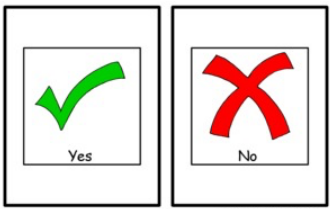
1. Good questioning
2. Giving us ways to answer
   - Visual aids
   - Written and picture choice
3. Verify!

SUPPORTIVE COMMUNICATION STRATEGIES

Good Questioning

Two types of questions:

- **Open (EXAMPLE?)**
- **Closed (EXAMPLE?)**



SUPPORTIVE COMMUNICATION STRATEGIES

Good Questioning

Two types of questions:

- Open (EXAMPLES?)
- **Closed (EXAMPLES?)**

- Avoid **multiple questions**
- **Active** voice
- Talk **slow**

REMEMBER

Active voice

Slow pace

Closed questions

+ SUPPORTIVE COMMUNICATION STRATEGIES

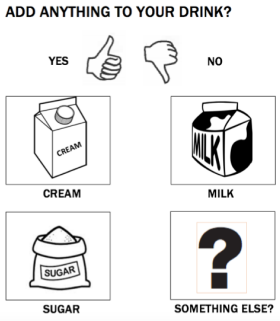
Giving us ways to answer

- Do not **interrupt** us
- Watch our **body language**
- **Show** that you are listening

+ SUPPORTIVE COMMUNICATION STRATEGIES

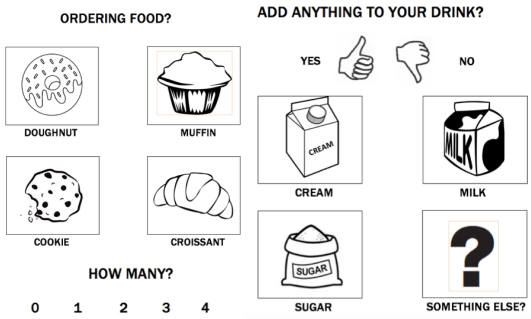
Written and Picture Choices

- Can be **verbal, written, pictures**
- Use **pictures,** point, offer 'yes/no'
- you may have to **cover one choice**



+ SUPPORTIVE COMMUNICATION STRATEGIES

VISUAL AIDS



+ SUPPORTIVE COMMUNICATION STRATEGIES

VERIFY THE MESSAGE

Verify:

- Did **I** understand **you**?
- Did **you** understand **me**?

Always **check that you understand**; do not pretend!

+

Any Questions?

Let's practice!

Find a partner

- One person = customer with aphasia
- Other person = Tim Hortons employee

Customer- Place an order with the employee. You can only use the words "yes/no"!

Employee- Use your supportive communication strategies!

Toolkit Input

Share your experience:

- As customer placing an order
- As employee receiving an order

1. What strategies did you use?
2. What was visuals were missing from toolkit?
3. What menu items/options can we add to toolkit to better facilitate conversation?

Workshop Review

Do you now understand:

- **aphasia and other communication disabilities**?
- the **challenges** of having a **communication disability**?
- how to **use supportive communication strategies** to **help** people with **aphasia communicate**

WORDS IN THE WORLD
WOW MOM
MOTS DANS LE MONDE

Exit Survey

If you are now willing to participate in our research, please raise your hand for a consent form.

Everybody fill out "Exit Survey"

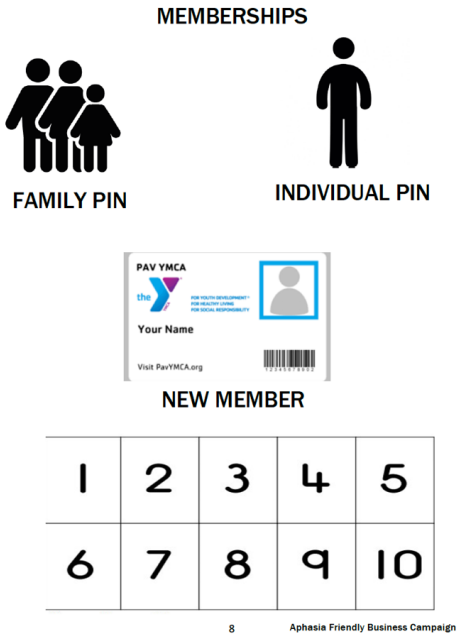
Social Sciences and Humanities Research Council of Canada | Conseil de recherches en sciences humaines du Canada | Canada

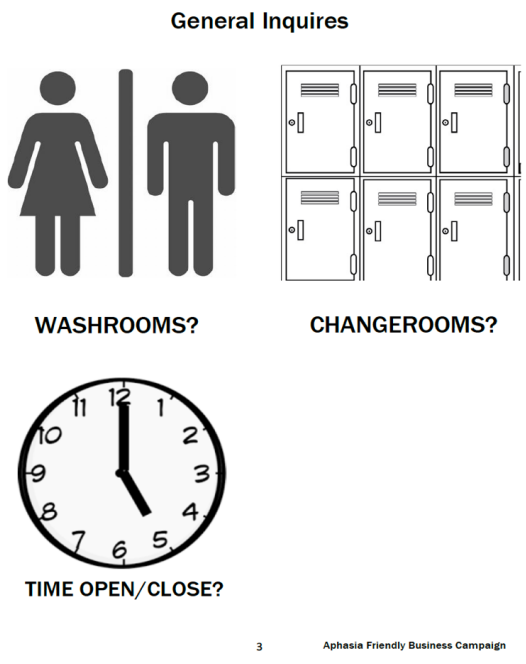
APHASIA FRIENDLY
WINDSOR

Julia Borsatto
Associate Director
borsatt@uwindsor.ca
226-787-7550

MARCH OF DIMES CANADA | Social Sciences and Humanities Research Council of Canada | Conseil de recherches en sciences humaines du Canada | Canada | University of Windsor

Appendix C: Sample Toolkit





Appendix D: Resources Provided (Alphabet and YES/NO Cards)

A	B	C	D	Yes	Mistake	I You
E	F	G	H	No	New Word	Bye Thanks
I	J	K	L	M	N	How When
O	P	Q	R	S	T	Where Why
U	V	W	X	Y	Z	What Who

Appendix E: Pre- Test

Aphasia Friendly Business Campaign
Intake Survey

Name: _____ **Gender:** _____ **Age:** _____

1. What business do you work for? _____

2. What are your primary job responsibilities? _____

_____

_____

3. Have you previously received any training on how to make your place of work more accessible for people with disabilities?

☐ YES ☐ NO

If YES, please list the type of accessibility training that you received and when you received it? (Fill in, as applicable. You may leave items blank.)

Type of Training: _____ Date: _____

Type of Training: _____ Date: _____

Type of Training: _____ Date: _____

4. Have you ever heard of a stroke?

☐ YES ☐ NO

5. Have you ever heard of aphasia?

☐ YES ☐ NO

If YES, which of the following best describes aphasia?

☐ A heart condition
☐ A circulatory condition
☐ A language disorder
☐ A spinal condition
☐ I'm not sure
☐ None of the above

If YES, in what context have you heard of aphasia? (Please check all that apply)

☐ Relative and/or Friend has/had aphasia
☐ On TV/Radio/Internet
☐ Through my work
☐ School
☐ Other: _____

The Aphasia Quiz
Please circle the correct response:

1. Aphasia means a person has difficulty retrieving words for speech and usually has some problems reading, writing and understanding spoken language.

   True False Don't Know

2. The cause of aphasia is usually due to a heart attack.

   True False Don't Know

3. If people have aphasia they will always have significant memory loss as well.

   True False Don't Know

4. Aphasia is more prevalent than Parkinson's Disease or Muscular Dystrophy.

   True False Don't Know

5. A person with aphasia may have no noticeable physical impairment.

   True False Don't Know

6. It is common for a person who has had a stroke or brain injury to have difficulty with communication.

   True False Don't Know

7. All individuals with aphasia have very similar symptoms of the same approximate severity.

   True False Don't Know

8. Although most people with aphasia are older than 50 years of age, it is not unusual for younger people to acquire this disability.

   True False Don't Know

9. If a person has difficulty with speech, it also means that they have intellectual deficiencies.

   True False Don't Know

10. Recovery from aphasia is usually complete within six months of treatment.

    True False Don't Know

11. Some individuals with aphasia return to work, however, most are forced to retire or change jobs and work in a modified capacity.

    True False Don't Know

Aphasia Friendly Business Campaign

Occupational Self- Efficacy (Rigotti, Schyns & Mohr, 2008)

Please consider these questions in regard to communication generally, and disability service providing:	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
I can remain calm when facing difficulties in my job because I can rely on my abilities.					
When I am confronted with a problem in my job, I can usually find several solutions.					
Whatever comes my way in my job, I can usually handle it.					
My past experiences in my job have prepared me well for my occupational future.					
I meet the goals that I set for myself in my job.					
I feel prepared for most of the demands in my job					

Appendix F: Post- Test

Aphasia Friendly Business Campaign
Exit Survey

Thank you for participating in our training and providing feedback on your experience. Your feedback is invaluable, as we continue to modify our training to better serve you.

Name: _____

1. Before the training, were you familiar with Aphasia?

   ☐ Yes

   ☐ No

2. Having now completed the training, please indicate if the training session:

The TRAINING SESSION	Strongly Agree 5	Agree 4	Undecided 3	Disagree 2	Strongly Disagree 1
Informed you about aphasia to a satisfactory understanding					
Adequately prepared you to people with Aphasia or other communication disorders					

3. Do you consider your place of work accessible to people with Aphasia, or any other communication difficulties?

Strongly Agree 5	Agree 4	Undecided 3	Disagree 2	Strongly Disagree 1

What changes can **you and/ or your employer** make at work to improve customer service with people with aphasia or communication disorders?

_____

_____

_____

_____

MARCH OF DIMES CANADA LA MARCHE DES DIX SOUS DU CANADA

The TRAINING SESSION	Excellent 5	Very Good 4	Good 3	Fair 2	Poor 1
Met the stated learning objectives.					
Was useful in my job.					
Was of appropriate length.					
Materials were adequate and helpful.					

The TRAINER	Excellent 5	Very Good 4	Good 3	Fair 2	Poor 1
Was knowledgeable about the subject matter.					
Effectively presented the material in a clear and organized manner.					
Provided answers to my questions.					
Was enthusiastic throughout the session.					

All things considered (i.e. content, length of session/s, trainer/s, location) please rate your overall satisfaction with the training.

OVERALL RATING	5	4	3	2	1

How can we improve this training? Please give us specific suggestions, comments or compliments.

The Aphasia Quiz
Please circle the correct response:

1. Aphasia means a person has difficulty retrieving words for speech and usually has some problems reading, writing and understanding spoken language.

   True False Don't Know

2. The cause of aphasia is usually due to a heart attack.

   True False Don't Know

3. If people have aphasia they will always have significant memory loss as well.

   True False Don't Know

4. Aphasia is more prevalent than Parkinson's Disease or Muscular Dystrophy.

   True False Don't Know

5. A person with aphasia may have no noticeable physical impairment.

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6. It is common for a person who has had a stroke or brain injury to have difficulty with communication.

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10. Recovery from aphasia is usually complete within six months of treatment.

    True False Don't Know

11. Some individuals with aphasia return to work, however, most are forced to retire or change jobs and work in a modified capacity.

    True False Don't Know

Aphasia Friendly Business Campaign

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Whatever comes my way in my job, I can usually handle it.					
My past experiences in my job have prepared me well for my occupational future.					
I meet the goals that I set for myself in my job.					
I feel prepared for most of the demands in my job					

VITA AUCTORIS

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