“YOU CAN LEAD A HORSE TO WATER…”:
PERSPECTIVES ON HEARING HEALTH IN OLDER ADULTS FROM
FOCUS GROUP EVALUATIONS OF AN EDUCATIONAL PRESENTATION

by

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Abstract

Age-related hearing loss (ARHL) is the third most common chronic condition in older adults in Canada and the United States (CASLPA, 2005), and has wide-spread implications. When untreated, ARHL’s effects can include safety concerns (e.g., Bruck & Thomas, 2009) and reductions in quality of life (e.g., Arlinger, 2003). There is ongoing interest in audiology into why the number of individuals seeking and using management strategies for ARHL remains so low. For example, only 19% of Canadians with hearing loss use hearing aids or hearing assistance technology (Brennan et al., 2009). Resistance to taking steps towards hearing health change may be due to many factors, such as perceptions of susceptibility, benefits, and barriers; self-efficacy and outcome expectations; and, lack of access to appropriate and trusted information (Cox et al., 2005; Egger et al., 1999; Hickson & Scarinci, 2007; Winsor, 2011).

In the present study, an information-sharing presentation, Hearing Health in Older Adults, was designed with the seniors’ advocacy group Council of Senior Citizens’ Organizations of British Columbia (COSCO). The presentation combined participatory action learning, peer teaching, peer learning, and narrative case studies to promote the health literacy of older adults about hearing health.

The purpose of this investigation was two-fold. The first aim was to evaluate the presentation. The second, broader aim was to explore hearing health change from the perspectives of older adults. Four minimally-led focus group discussions were held following the COSCO presentation Hearing Health in Older Adults. The data from these discussions were analyzed using the inductive techniques of qualitative description and thematic analysis. The dialogue that ensued was varied, yet had several common threads: five central themes emerged. Each theme is discussed in terms of how it might influence initiating and supporting change; in
relation to existing literature; and, in light of health behaviour theories from the field of psychology. And finally, the implications of this study for both health literacy educators and the field of audiology are explored.
Preface

This study was reviewed and approved by the Behavioural Research Ethics Board of the University of British Columbia. The certificate number of the ethics certificate obtained is H12-00710.
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<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>ACE</td>
<td>Active Communication Education</td>
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<td>ARHL</td>
<td>Age-related hearing loss</td>
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<td>BC</td>
<td>British Columbia</td>
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<td>CIHR</td>
<td>Canadian Institutes of Health Research</td>
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<td>COSCO</td>
<td>Council of Senior Citizens’ Organizations of British Columbia</td>
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<td>ECHO</td>
<td>Expected Consequences of Hearing Aid Ownership</td>
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<td>ENT</td>
<td>Ear, Nose and Throat Doctor (Otolaryngologist)</td>
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<td>HAT</td>
<td>Hearing assistance technology</td>
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<td>HBM</td>
<td>Health Belief Model</td>
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<td>HHIE-S</td>
<td>Hearing Handicap Index for the Elderly – Screener</td>
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<td>HIP</td>
<td>Hearing Instrument Practitioner</td>
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<td>HRQoL</td>
<td>Health Related Quality of Life</td>
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<td>PAL</td>
<td>Participatory action learning</td>
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<td>NCOA</td>
<td>National Council on the Aging</td>
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<td>SCT</td>
<td>Social Cognitive Theory</td>
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<td>SOC</td>
<td>Stages of Change</td>
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<td>TRA/TPB</td>
<td>Theory of Reasoned Action/Theory of Planned Behaviour</td>
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<td>URICA</td>
<td>University of Rhode Island Change Assessment scale</td>
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<td>WHO</td>
<td>World Health Organization</td>
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Dedication

To all adults and elders who take the time to share their knowledge and experiences, who share stories, and who reminisce of days gone by.

To grandparents, parents, aunts and uncles – especially those earning these titles as honorary status – who make the world a better place, richer and warmer for their generosity in spirit.

If I embrace even a portion of the wisdom, grace and dignity of those I have had the privilege of knowing, loving, and learning from, I will certainly age well. Thank you, one and all.
Chapter 1: Literature Review

1.1 Introduction

Age-related hearing loss (ARHL) is a health problem with wide-spread implications. As the third most common chronic condition in older adults in Canada and the United States (CASLPA, 2005), it is a problem that most people will be affected by, either with their own hearing or that of a communication partner. This literature review begins with an overview of the problem: that despite its common occurrence, wide-spread consequences and effective management options, ARHL is left untreated by the majority of older adults who are affected by it. We then explore the reasons put forward for this, and begin to understand how positive changes might be supported.

Throughout this review, the term “hearing health change” is used as shorthand for “change in hearing health behaviour.” This term is meant to encompass any step that a person takes, or any change that he or she makes that propels the individual towards improved ability to communicate. Traditionally, the main option of aural (re)habilitation or management of ARHL has been hearing aids: it is now recognized that this may not be appropriate for all individuals and all communication needs. For this reason “hearing health change” is used as an all-encompassing term for both prevention and (re)habilitation.

1.1.1 Definition and prevalence of ARHL.

The reported prevalence of hearing loss varies depending on what definition of hearing loss is used. Hearing loss is defined by the World Health Organization (WHO) as clinically present when hearing thresholds worse than 25 dB HL at the speech frequencies (0.5, 1, 2, and 4 kHz) in the best ear are found using objective pure-tone audiometry (WHO, 2013). Several valid
and reliable self-report measures are also routinely used to help determine the presence of hearing loss. While estimates of hearing loss prevalence are significantly higher if they are measured with objective rather than self-report tools (Hidalgo et al., 2009), self-report measures are essential to characterizing the personal activity restrictions and participation limitations experienced from a hearing loss (WHO, 2001).

The prevalence of hearing loss increases with age. Havlik (1986) found that 23% of adults between 65 and 74 years of age reported having a hearing impairment. Estimates increased with age, with 48% of those over the age of 85 reporting some difficulty hearing (Havlik, 1986). More recent analysis of a cross-sectional survey of adult Canadians in 2000-2001 found 50% of men and women over 90 reported having a hearing problem, suggesting that prevalence rates have remained stable over recent decades (Woodcock & Pole, 2007).

Given the large proportion of the older adult population that has hearing loss, it is important to understand the causes and consequences of hearing loss to fully grasp the implications of appropriate management.

1.1.2 Causes of ARHL.

The etiology of hearing loss in older adults is related to a number of interacting factors. Genetic predisposition and accumulation of damage over time (from noise or aging-related processes, for example) are two such factors that contribute to ARHL (Kiessling et al., 2003). ARHL has also been found to be associated with the occurrence of other conditions: high blood pressure and chronic diseases, such as heart disease and diabetes (Woodcock & Pole, 2007); pain, arthritis, and mobility problems (Havlik, 1986); arterial sclerosis (Yoshioka et al., 2010); smoking and elevated cholesterol (Shargorodsky, Curhan, Eavey & Curhan, 2010). It is thought that some of these co-morbidities may be related to ARHL by a common cause while others
may simply result from bias in diagnosing and reporting conditions when other illnesses are present (Brennan, Gombac, & Sleightholm, 2009; Woodcock & Pole, 2007). Some causes of ARHL are unavoidable (e.g., genetics), but measures can be taken to decrease the chances of hearing loss developing or to minimize its severity (e.g., eating well, minimizing noise), although damage cannot be reversed once it has occurred.

1.1.3 Possible consequences of ARHL.

ARHL can result in the attenuation and distortion of sound as well as changes in how sound is processed by the brain. This implies that ARHL not only affects one’s ability to hear, but also to listen and comprehend (Kiessling et al., 2003). When untreated, hearing loss has direct implications for safety (e.g., signals of immediate danger) and more globally for quality of life (e.g., socializing, hearing birds and music; e.g., Arlinger, 2003; Bruck & Thomas, 2009; Lesner, 2003; Pichora-Fuller & Schow, 2007). People with hearing loss are more likely to report decreased quality of life than those without hearing loss, including in psychosocial, emotional, physical, cognitive, and behavioural aspects of one’s life (e.g., Arlinger, 2003; Dalton et al., 2003; Havlik, 1986; Patterson, 1994; Rawool & Kiehl, 2009). Hearing loss is associated with reports of impairment with both activities of daily living (e.g., walking, eating, bathing) and instrumental activities of daily living (e.g., preparing meals, shopping, using the telephone; Dalton et al., 2003). Individuals with hearing loss use more effort than those with normal hearing as they try to listen. This increased effort is often reported as feelings of fatigue (Arlinger, 2003). Fatigue may influence the desire to participate in regular communication, social gatherings, and other activities, as well as the enjoyment felt from doing so.
Implications of delaying treatment.

Older adults often delay treatment for ARHL (e.g., Davis, Smith, Booth, & Martin, 2012). For example, in the United Kingdom people who are referred by a family doctor for hearing assessments have often noticed hearing difficulty for 10 or more years (Davis et al., 2012). The longer intervention is delayed, the worse the hearing loss, due to its likely progression, and the more difficulty an individual will likely find when adapting to amplified sound (e.g., Arlinger, 2003; Davis et al., 2012). This difficulty in adaptation may be explained by auditory deprivation. When an ear has not had auditory stimulation (i.e., was not fitted with a hearing aid) for a period of time there is a reduction in the ability to recognize speech when it is presented to that ear due to changes in the auditory pathway (Arlinger, 2003). The longer one does not receive adequate sensory stimulation, the more likely it is that auditory deprivation will occur. Deprivation may increase the amount of adaptation required to accept and use amplified sounds as well as limit the possible benefits from amplification in the future, because of changes in the integrity of the auditory pathway.

It is also recognized that it is easier to learn how to care for hearing aids at a younger age and lesser hearing loss (Davis et al., 2012). Over time, untreated hearing loss is likely to result in greater, long-standing consequences that are more difficult to overcome than if treatment had been sought earlier.

ARHL in relation to depression and dementia.

A survey by the National Council on the Aging (NCOA; 2000) found that adults who reported having untreated hearing loss were more likely than those with treated hearing loss (i.e., who use hearing aids) to report feelings of sadness and depression; worry and anxiety; paranoia; emotional turmoil and insecurity. These individuals also participated less in social
activities. Withdrawal from social activities is often noted to have an effect on co-morbid conditions such as depression and dementia, and their subsequent treatment (Arlinger, 2003; ASHA, 2004; Uhlmann, Larson, Rees, Koepsell, & Duckert, 1989).

A study investigating the association of both self-reported vision and hearing impairments with depressive symptoms found that people with moderate or more hearing loss were significantly more likely than people without hearing loss to report feeling lonely, remote, and depressed, and to report fair to poor mental health (Wallhagen, Strawbridge, Shema, Kurata, & Kaplan, 2001). Woodcock & Pole (2007) suggested that feelings of depression reported by those who are deaf or hard of hearing could reflect real or perceived stigma and interpersonal barriers relating to the hearing loss. These feelings could result in psychological strain and fatigue, as people with hearing loss attempt to adapt to the hearing environment.

In a 1989 study, Uhlmann et al. found that hearing losses greater than 40 dB HL were significantly correlated with reduced cognitive function and increased probability of dementia in older adults. In 2011, further research suggested that hearing losses of even 25 dB HL were independently associated with clinically-significant reductions in memory and executive function (Lin, Ferrucci, et al., 2011), and that one-third of the risk of incident all-cause dementia was associated with hearing loss (Lin, Metter, et al., 2011).

ARHL directly, through sensory loss and possible auditory deprivation, and indirectly, through its potential effects on social involvement, decreases the amount of auditory and intellectual stimulation reaching the brain. As one ages, sensory function is increasingly correlated to the maintenance of cognitive function (Baltes & Lindenberger, 1997, as cited in Arlinger, 2003). This body of evidence suggests that older adults who leave hearing loss untreated put their quality of life and mental and cognitive health at increased risk over time.
While this section has focused on the possible consequences to the person who experiences hearing loss, it is also important to note that the ramifications of hearing loss are not isolated to this individual. The effects of hearing loss on the lives of communication partners are introduced below.

**ARHL and communication partners.**

Hearing loss is ultimately a problem of communication and therefore affects all people who communicate with someone with a hearing loss. The WHO (2001) has termed this type of problem a *Third-Party Disability* (as cited in Hickson & Scarinci, 2007). Feelings of rejection, stress, embarrassment, frustration, anger, and isolation commonly result if one’s main communication partner denies, fails to recognize, or fails to seek help for a hearing loss (Dalton et al., 2003; Rawool & Kiehl, 2009). An interview-based qualitative study by Scarinci, Worrall, and Hickson (2008) found that the reports of normal-hearing spouses of people with ARHL followed several underlying themes. One theme was the broad-ranging effects of hearing loss on almost all tasks and activities of the spouses’ everyday lives, including communication, daily activities (such as watching tv), emotions (frustration and embarrassment), the relationship (less intimate talk and increased tension), and social factors (reduction in group social activities). A second theme was the spouses’ feelings of an imbalance of adjustment, where the spouse felt that he or she had to make the majority of ongoing effort to adapt to his or her partner’s hearing loss. This phenomenon of communication partners bearing a significant portion of the activity limitations and participation restrictions that result from a hearing loss is of ongoing interest in audiology (Hickson & Scarinci, 2007); accessing the perspectives of communication partners is integral to fully understanding the implications of ARHL.
It is ARHL’s relatively common occurrence and considerable consequences for both the individual and his or her communication partners that make it essential that diagnosis and management of a suspected hearing loss begin promptly and appropriately. The tools available to do so will be briefly discussed next.

1.1.4 Diagnosis and management of ARHL.

The field of audiology is well-equipped to diagnose hearing loss in individuals across the lifespan with any level of ability or cooperation (Katz, Medwetsky, Burkard, & Hood, 2009). ARHL can be readily identified using behavioural and objective tests of hearing function, as well as with validated self-report measures. Once a hearing loss is identified, treatment and management options exist that have been shown to be effective in terms of communication, and quality of life.

Traditional management of ARHL focuses on provision of amplification in the form of hearing aids (e.g., Chisolm, Abrams, & McArdle, 2004; Mueller, Johnson, & Carter, 2007; Rawool & Kiehl, 2009). Randomized control trials have found improved social function, communication, and depression scores in individuals using hearing aids as compared to controls. Chisolm et al. (2007) also report an overall improvement in Health Related Quality of Life (HRQoL) including improved psychological, social, and emotional effects by those using hearing aids. Other studies have found hearing aid use reduces symptoms of depression and improves measures of quality of life in terms of general health, vitality, social functioning, emotional stability, and mental health (Arlinger, 2003; Boi et al., 2012). Further benefits that have been reported by people who used hearing aids include better relationships with their families, better feelings about themselves, improved mental health, and greater independence and security (NCOA, 2000). Interestingly, significant others have also reported improvements
from hearing aids, sometimes to an even greater degree than reported by the person with the hearing loss (Boi et al., 2012; NCOA, 2000).

It is important to note that amplification is not the only management option available for ARHL, although it is likely the most well known. Aural rehabilitation, including communication training and hearing assistance technologies (HAT), can work both separate from and alongside hearing aids (e.g., Chisolm et al., 2004; Jennings, 2009; Laplante-Lévesque, Hickson, & Worrall, 2011). For example, Laplante-Lévesque et al. (2011) reported that individuals with ARHL and their communication partners benefited from group and individual aural rehabilitation programs, as well as the use of general communication strategies. The authors found that when offered options for intervention, 46% of participants opted for something other than hearing aids: either communication programs (24%) or no intervention (22%). Hickson, Worrall, & Scarinci (2006) reported that 89% of people with hearing loss and 88% of the significant others who participated in the study said that a communication program (ACE; Active Communication Education) changed his or her enjoyment of life to some extent. This is also supported by the findings of Chisolm et al. (2004), who found that when an aural rehabilitation program was undertaken along with hearing aids, participants were better able to use communication strategies and more quickly adjusted to the hearing loss than if they received hearing aids alone. It is apparent that there is a role for communication programs in the rehabilitation of hearing loss, with or without hearing aids.

HAT such as amplified telephones and bed shakers, are also considered appropriate and adequate for some people’s hearing loss management needs (Lesner, 2003; Mueller et al., 2007). For example, HAT may be more appropriate than hearing aids for people with poor dexterity or arthritis because of the size of the controls; for people with poor cognitive function or in long-
term care because of the ease of maintenance by others; for people resistant to hearing aids because they may be seen as addressing a need that exists in only specific situations; and, for people who are financially unable to purchase hearing aids because HAT may be less expensive (Lesner, 2003).

1.1.5 Summary of ARHL.

Despite the possible consequences and the variety of management options available, many people still leave hearing loss untreated. To best support the management of individual hearing health it is important to recognize the necessity of providing the best care to facilitate each individual. An introduction to the variables affecting this process of hearing health change is presented below.

1.2 Towards a Broader Understanding of Hearing Health Change

Despite its broad consequences, readily available tests for diagnosis, and the accessibility and effectiveness of management options, as few as 19% of individuals in Canada with hearing loss use assistive devices (hearing aids or HAT; Brennan et al., 2009). As the most important treatment for hearing loss, there is ongoing interest into why the number of individuals using amplification remains so low (e.g., Cox, Alexander, & Gray, 2005). Understanding this resistance to change is integral to improving hearing health in the older adult population.

Barriers and facilitators are often considered the most important determinants of health behaviour changes. Investigation of the barriers and facilitators to hearing health change has focused on hearing aids, with little mention of HAT or communication strategies. In the following sections, barriers and facilitators to hearing aid uptake and use are discussed, and health behaviour change according to health psychology is explored.
1.2.1 Barriers and facilitators to hearing health change.

Many barriers and facilitators to hearing health change have been proposed. One significant barrier is that ARHL is unrecognized in a large proportion of those affected by it. Once a hearing loss is recognized, many further barriers exist that may need to be overcome before one will seek help or use a recommended treatment. In a study by Winsor (2011) four interacting themes were found to be both the main barriers and facilitators affecting hearing aid uptake in older women with ARHL: self-perceived hearing ability, cost, influence of others, and the need for information gathering for informed decision making. In a systematic review of the literature, Jenstad and Moon (2011) reported that factors such as self-reported hearing loss, degree of hearing loss, perceived stigma, coping strategies and locus of control have a relatively consistent influence on hearing aid uptake, while age, gender and cost have a more complex impact. Following is a brief overview of some of these key areas.

**Self-perceived hearing ability.**

Self-perceived hearing ability is considered to be one of the most important determinants of whether or not people will take action to improve their hearing health (Hickson & Scarinci, 2007; Palmer, Solodar, Hurley, Byrne, & Williams, 2009). While people are more likely to seek amplification if they have greater audiometric thresholds (i.e., worse hearing), this measure is only generally related to increased self-reported disablement (Cox et al., 2005; Garstecki & Erler, 1998; Hickson & Scarinci, 2007). This finding has two implications. Firstly, some people with less severe hearing loss thresholds may experience considerably larger than expected activity limitations and participation restrictions and may subsequently seek help. Alternatively, others with more severe hearing loss thresholds may not recognize the hearing loss or fail to understand the extent of its impact and will not seek help. For the latter group of individuals,
this is due at least in part to ARHL’s slow progression and initially minimal impact in quiet communication environments (Davis et al., 2012; Rawool & Kiehl, 2009). Hearing loss may also be seen as unimportant or considered to be a “normal” part of aging (Dalton et al., 2003), and some people may in fact be in denial that any difficulty in hearing exists (Rawool & Kiehl, 2008). Until hearing loss is recognized and its impact is perceived, it is unlikely that any change to improve hearing health will occur (Garstecki & Erler, 1998).

**Cost.**

Perceived cost of amplification is often considered to be a main barrier to hearing aid uptake. While cost might refer to any number of factors (e.g., time, social standing), monetary cost is implicit. In the Canadian adult population, cost was the most commonly cited reason for having unmet assistive device needs (Statistics Canada, 2008). Winsor (2011) found that older women often thought of the cost of amplification in terms of the amount of benefit they expected to gain from wearing hearing aids, and whether that was worth the amount of money they would have to spend to have the hearing aids. Garstecki and Erler (1998) also found that when participants were asked about the adequacy of one’s income to meet his or her needs, it was only those people who stated that their income met their needs who pursued amplification.

Despite cost being a commonly assumed barrier, both Knudsen, Oberg, Nielsen, Naylor, & Kramer’s (2010) literature review and Jenstad & Moon’s (2011) systematic review caution against this assumption, given that both cost and socioeconomic factors have shown mixed effects on hearing health change. This conservative view is also supported by the finding that even when hearing aids are provided as part of publicly funded health-care systems at no personal monetary expense, uptake rates remain low (e.g., Barton et al., 2001).
**Personality factors and stigma.**

Investigations of personality and stigma in relation to hearing health have been ongoing, with mixed results (Cox et al., 2005). Cox et al. (2005) investigated the personality traits of people who do and do not seek hearing aids. The authors found that those individuals who sought hearing aids scored lower than the average population on scales of Openness and Neuroticism. The authors suggested that individuals who were less successful at using other methods of coping with hearing loss, such as using communication strategies, and who were less concerned with the embarrassment felt when admitting a hearing loss, were more likely to seek treatment than those who were more successful at coping and less concerned with embarrassment. Cox et al. (2005) also found that individuals who pursued amplification had a significantly higher internal locus of control (i.e., greater belief in one’s ability to control what happens to one’s self) than those who did not pursue amplification.

Stigma has been addressed in several studies. Woodcock & Pole (2007) found that when individuals with hearing loss experienced real or perceived stigma, psychological strain and even depression could result. Gramstad, Storli, & Hamran (2012) cautioned that using assistive devices – including hearing aids – requires an individual to overcome the negative perceptions he or she has about the devices as symbols of disability and old age. This coincides with findings that certain attitudes, such as amplification being conspicuous, are often present in those who do not want or do not use hearing aids (Cox et al., 2005; Garstecki & Erler, 1998; Knudsen et al., 2010).

**Influence of others.**

Significant others often play an integral role in the hearing health actions of those with ARHL. Duijvestijn et al. (2003) found that the majority of people who seek help initially do so
because of social pressure from others, often family members. Additionally, involving communication partners in the rehabilitation process can increase effectiveness of both hearing aids and aural rehabilitation programs (Collins, Souza, O'Neill, & Yueh, 2007). In fact, the communication partner often needs to learn how to facilitate communication (Hickson et al., 2006). Social support has also been found to be a positive predictor of satisfaction with and hours spent using a hearing aid (Erler, 1995 as cited in Garstecki & Erler, 1998).

Winsor (2011) noted that older women’s hearing health decisions were influenced by others in several ways. Close family members’ recognition of the hearing loss or the need to do something about a hearing loss often prompted action, but was a deterrent if it was classified as “nagging.” Interactions with other people who had hearing loss were also both facilitator and deterrent; for example, recognizing that someone had an untreated hearing loss and subsequently feeling frustrated when trying to talk to them acted as a facilitator, while wondering why others did not successfully wear hearing aids acted as an obstacle.

The relationship with the health care professionals is also an important factor in choosing where and when to pursue help (Winsor, 2011). In healthcare systems where the family doctor is often the first point of contact for health concerns, lack of attention to ARHL by a physician and possible uncertainty with referrals to hearing health professionals can perpetuate the thought that hearing loss is not important and does not require urgent intervention (Davis et al., 2012; Gilliver & Hickson, 2011). Even in health care systems where physician referrals are not required for hearing assessments, a family doctor can play an important role in facilitating help-seeking for hearing health by showing an active interest in the individual’s communication abilities (Gilliver & Hickson, 2011). Winsor (2011) found that hearing health professionals were both a help and hindrance, depending on what the clinician said about the particular hearing
loss, and what was surmised about the clinician’s motivation (i.e., making the best decision for the client vs. making money).

**Information.**

Winsor (2011) emphasized the need for further study regarding the impact of information gathering and informed decision making, as a means to both understand and facilitate seeking amplification. This suggestion is supported by Kochkin’s (2007) findings that half of participants who had ARHL but did not have hearing aids reported having insufficient information regarding their loss, where to get tested, or where to purchase hearing aids. This uncertainty acted as a barrier to seeking help. Garstecki & Erler (1998) suggested that increased information about hearing loss will increase acknowledgement of a hearing problem and its consequences, which will result in improved adherence to professionally recommended actions. The role of information in health change should not be taken lightly, as is highlighted in the overview to the models of health change and with information-sharing, below.

As discussed, there are many recognized barriers and facilitators to hearing health change. While some, such as self-perceived hearing loss, have straight-forward influences on changing hearing health, others are more difficult to explain. Traditionally in hearing health research, the balance of barriers and facilitators has been seen as the determinant of whether or not change occurs. It has not been until recent years that other variables discussed in the health psychology literature, such as self-efficacy, have been of interest to hearing health researchers and professionals. These variables provide other avenues for understanding individuals’ resistance to change. Therefore, an introduction to the health behaviour change literature is necessary to further understand hearing health change.
A greater understanding of the resistance to hearing health change can be supported by principles derived from health psychology and health behaviour change theories. There is wide-ranging literature investigating health behaviour change. Research has focused on understanding health behaviours, the process of health behaviour change, and using this knowledge to support and predict behaviour changes (Noar & Zimmerman, 2005; Noh, Gagne, & Kaspar, 1994). It is apparent that each of these areas is of interest to hearing health professionals.

The list of health behaviour theories is extensive, but only a small subset has formally been applied to hearing health. These include: Health Belief Model (HBM), Theory of Reasoned Action and Theory of Planned Behaviour (TRA/TPB), Social Cognitive Theory (SCT), and Transtheoretical Model/Stages of Change (SOC; Manchaiah, 2012; Noar & Zimmerman, 2005; Saunders, 2012). While the focus of each model or theory varies, there is considerable redundancy in their constructs; for example, perceived benefits of the HBM are likely the same as the expectation of a positive outcome in SCT (Bandura, 1998; Noar & Zimmerman, 2005). Each theory provides some insight into why a client might resist changing his or her behaviour and by extension, how behavioural change might be supported. Further research is needed to assess the applicability of each of these theories and their components to hearing health (Babeu, Kricos, & Lesner, 2004; Kaldo, Richards, & Andersson, 2006; Laplante-Lévesque et al., 2011; Noh et al., 1994). The theories are expanded below and summarized in Appendix A. For each theory there is also a brief review of its use in the hearing health literature.

**Health belief model.**

The Health Belief Model (HBM) was proposed by Rosenstock (1966) as a way to explain individual differences in the uptake of health services. As a cognitive-based model, it
emphasizes rational decision-making. In the HBM, the actions of individuals are explained by six beliefs (Bowling, 1997; Egger, Spark, Lawson, & Donovan, 1999; Janz & Becker, 1984):

- **Perceived susceptibility** - the belief that one is vulnerable to or at risk for a condition
- **Perceived severity** - the belief regarding the seriousness of a condition
- **Perceived benefits** - the belief that a behaviour/action will provide a positive result
- **Perceived barriers** - the belief that there are barriers that must be overcome in order to take action
- **Perceived self-efficacy/control** - the belief in one’s ability to perform an action
- **Cue to action** - something (either internal or external) that occurs to spur the individual to take action or take up the intervention

Beliefs regarding perceived barriers and perceived susceptibility to illness are the greatest predictors of subsequent health behaviours (Wyper, 1990 as cited in Ogden, 2007). That is, the greater the perceived susceptibility to the illness and the smaller the perceived barriers to change, the greater the likelihood that the individual will change the health behaviour. Barriers and susceptibility may be directly addressed through information-sharing and health promotion efforts. Sharing information might address any of the other beliefs as well, and might especially provide the cue to action that pushes some individuals to acknowledge the health problem (Ogden, 2007; G. H. Saunders, personal communication, August 29, 2012).

The HBM has been used in several ways in audiology, including understanding help-seeking behaviour, hearing aid use and acquisition, and hearing conservation. Noh et al. (1994) suggested ways in which the HBM could be applied to the field of audiological rehabilitation. According to the HBM, an individual who recognizes his or her susceptibility to hearing loss is more likely to seek hearing screening. Greater perceived susceptibility may also lead to increased awareness of the severity of the consequences of untreated hearing loss, such as its effects on communication. Once one recognizes his or her vulnerability and the severity of hearing loss, the decision to seek help will be determined by a cost-benefit analysis; the possible improvement in interpersonal communication might be weighed against the money and time
required to try hearing aids. G. H. Saunders (personal communication, August 29, 2012) agrees that the HBM can be useful when considering the likelihood of occurrence of hearing-related change behaviours. In her work (in progress), a questionnaire assessing each of the six beliefs listed above was very good at predicting uptake of hearing-related behaviours, such as help-seeking, hearing aid acquisition, and hearing aid use.

The constructs of the HBM have been used for the study of hearing conservation (Saunders & Griest, 2009; Sobel & Meikle, 2008). A hearing loss prevention program for veterans was designed based on the HBM by Saunders and Griest (2009). The authors’ multi-media based modules addressed each of the constructs of the HBM, and also included a hearing screening tool. For example, it addressed perceived susceptibility by providing information on how the ear is damaged by noise and at what noise level damage occurs. While evaluation of this intervention has not been published, it is apparent how addressing each belief with relevant information could provide a framework for both intervention design and evaluation.

Theory of reasoned action and theory of planned behaviour.

The Theory of Reasoned Action (TRA) was developed to try to predict health behaviours. It focuses on the effects that personal attitudes and social norms have on behavioural intentions, and then the ability to predict actual behaviour based on intention (Fishbein & Ajzen, 1975; Noh et al., 1994; Ogden, 2007). When it was expanded to include perceived behavioural control, or self-efficacy, as another predictor of behavioural intentions it was re-named the Theory of Planned Behaviour (TPB). According to TRA/TPB, a change to behaviour will only be attempted following the receipt of new information about an event, object, behaviour, or issue (Fishbein & Ajzen, 1975). Briefly, the TRA/TPB predictors are:
• **Attitudes** - the favourable and unfavourable beliefs about the behaviour including: severity of the threat, the likelihood of the desired outcome occurring, and the evaluation of the outcome’s desirability

• **Subjective norms** - how important the behaviour is perceived to be to others, as well as how important it is to comply with others

• **Perceived behavioural control** – both internal and external factors may influence one’s perception of his or her control over the behaviour

• **Behavioural intentions** – the behaviour that the individual intends to pursue, once influenced by the previous predictors, is thought to be indicative of what behaviour will actually occur in the future

There has been some interest in the application of TRA/TPB to audiology in general (Noh et al. 1994) and in relation to hearing conservation programs (Quick et al., 2008; Sobel & Meikle, 2008). Noh et al. (1994) suggested that TRA/TPB can be used to predict hearing health seeking behaviours and compliance with management plans. Overcoming the barriers presented by each predictor (e.g., changing an individual’s attitude towards hearing health through informational counseling) will enforce behavioural intentions and support actual behavioural change. TPB was used to design and evaluate an information-sharing program for hearing protection use in coal miners by Quick et al. (2008). It was found that attitudes toward hearing protection, subjective norms, and perceived behavioural control were all significant predictors of both the intention to wear hearing protection and actually reporting wearing hearing protection either immediately or six weeks post-intervention.

**Social cognitive theory.**

Developed by Bandura (1977), the Social Cognitive Theory (or Social-Learning Theory; SCT) focuses on the importance of an individual’s social environment. It emphasizes the need for knowledge, as the “precondition for change” (Bandura, 1998, p 624). SCT was the first theory to incorporate self-efficacy as an important predictor of behaviour, recognizing it as a direct and indirect determinant of both intention and action (Bandura, 1998; Egger et al., 1999).
According to the SCT, action is regulated by the following factors regarding the social environment and the individual’s knowledge:

- **Self-efficacy** – belief in one’s own abilities affects what goals are set, the strength of commitment to the goals, and the expected outcomes. It is vitally important to support self-efficacy through positive skill-building experiences, by example from social models, or using social persuasion. The stronger the self-efficacy, the more likely that the health-promoting behaviour will occur.
- **Outcome expectations** – predicted effects of the behaviour; anticipated positive outcomes are incentives and negative outcomes are disincentives. These may be physical effects of the behaviour, social sanctions, and self-sanctions.
- **Concrete goals** – goals act as self-incentives, which may be distal (i.e., providing long-term direction) or proximal (i.e., guiding effort and immediate action).
- **Perceived impediments and facilitators** – personal, societal or environmental barriers or catalysts of action.
- **Reciprocal determinism** – mutual influence of person’s behaviour on environment and environment on person.
- **Observational learning** – learn best via modeling behaviour of others, especially peers.

Explicit application of the SCT to hearing health is limited, but its potential use in hearing conservation was explored by Sobel & Meikle (2008). Based on their review of the literature, the authors suggested that training peer role models to present information about hearing conservation practices to workers would, through social influence, reduce the risk of dangerous behaviour in both the workers and those individuals chosen to be the peer leaders (that is, the presenters).

**Stages of change.**

The Stages of Change (SOC) presents a framework for the actual process through which change to a health-related behaviour may occur (Prochaska & DiClemente, 1983). This is in contrast to the previous models in which the main beliefs, predictors, and factors influenced change but did not track it in a progressive fashion. The SOC proposes that behaviour change occurs through discrete stages of readiness to make behavioural change. In other words,
progress, or moving to the next stage of change, is quantified by how far in the future someone is seriously intending to change. The SOC has several other tenets including: change is a complex process with ongoing progression and regression through stages; willingness to change precedes actual behavioural change; and, helping someone change depends on recognizing which stage he or she is at and tailoring services to that stage and mindset.

According to this model, there are five stages of change corresponding to when an individual is intending to make a behaviour change. They are:

- **Precontemplation** – no intention to change within 6 months
- **Contemplation** – plan to change within 6 months
- **Preparation** – plan to take action in the next month
- **Action** – currently making changes
- **Maintenance** – changes have been made and are consistent

Using the SOC, the goal of a single, brief intervention is to help each participant move to the next stage (Prochaska, Redding, & Evers, 2008; Steptoe, Kerry, Rink, & Hilton, 2001). This can be measured with pre- and post-intervention questions that target when a change might take place. The SOC suggests that change can be measured incrementally from the very beginning of an intention through to change being reliably adopted.

The SOC has been applied to hearing health in several instances, including the process of receiving amplification, tinnitus management, and hearing conservation programs. Babeu et al. (2004) outlined how the SOC could be used to promote client-centred methods in managing amplification, as a way of understanding an individual’s decision to change behaviour. The authors suggested that the hearing-specific steps include: (a) have a hearing test to assess need for amplification, (b) assess stage of readiness for amplification, and (c) determine what activity is appropriate for that stage of readiness. They provided a list of activities that could be performed depending on the stage of readiness, such as discussing the stigmatization of hearing
loss for someone in precontemplation or contemplation. At the precontemplation stage it has been found that general support towards change is more appropriate than enthusiastic, overly-specific advice (Norcross & Prochaska, 2002).

The SOC has also been used in several other areas of audiology including: (a) the design of a questionnaire specific to readiness to change attitudes and behaviours about tinnitus (Kaldo et al., 2006); (b) the evaluation of acceptance of hearing protection devices in factory workers (Raymond & Lusk, 2006); and, (c) predicting the uptake and outcome of hearing aid and communication program interventions in older adults (Laplante-Lévesque, Hickson, & Worrall, 2012; Laplante-Lévesque et al., 2011; Milstein & Weinstein, 2002). These studies provide support for the use of the SOC in a wide range of hearing health research and practice.

1.2.3 Applying health behaviour theory to audiology: The client journey.

While the health behaviour theories discussed here differ in their focus on specific areas of behavioural change, each provides some ideas as to why people might be resistant to changing health behaviours. Overall, people may not make a change to health behaviours for complex reasons. These may include:

- the need to appreciate the personal risk associated with the condition (perceived susceptibility and severity [HBM], attitudes [TRA/TPB]),
- expectations around making the change (perceived benefits and barriers [HBM]; attitudes [TRA/TPB]; perceived facilitators and impediments, perceived outcomes [SCT]),
- self-efficacy regarding one’s ability to change (HBM, SCT, TRA/TPB),
- the influence of the environment (SCT),
- and, the need to acknowledge and focus on incremental change (SOC).

Each theory also suggests how behavioural change might be supported by other people. This includes individually addressing each of the reasons above, as well as:

- providing a cue to action (HBM),
- setting goals for a specific time frame (SCT, SOC),
- providing role models from which people can learn (SCT),

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• tailoring support (i.e., information) to be appropriate for the individual’s readiness to change (SOC).

Although there has been some interest in applying these behaviour change models to hearing health, as discussed, further research is needed to assess the suitability of the theories and their components to the field of audiology. As a discipline struggling with clients’ commitment to change, improving the implementation and upkeep of hearing health change is of interest to clinicians and researchers alike.

Traditional focus has been on the use of hearing aids as the ultimate goal of hearing health change, but this view is changing. Hearing health management is now considered to be an ongoing process or pathway (Ida Institute, 2009; Laplante-Lévesque, Knudsen, et al., 2012; Manchaia, Stephens, & Meredith, 2011). Increased knowledge of how to help someone move efficiently along this pathway is integral to improving his or her hearing health. This involves being more client-centred and recognizing that many complex factors can affect change, as suggested above from the health psychology literature. Within a health change journey there is a breadth of possible actions that a client might consider taking. The specific steps a client will take for his or her health depends not only on where he or she is in the process of changing, but also what is known about both the possible next steps and the implications of taking or not taking such steps. For example, an individual will only effectively use hearing protection if he or she knows where to get it and how to use it properly.

Several theories of the process of hearing health change have been developed. Knudsen et al. (2010) suggested that the process of receiving amplification for the treatment of ARHL is a journey comprised of the critical phases of help-seeking, uptake, use, and satisfaction. Further research has suggested that within each phase there are many smaller, more specific steps. For example, within help-seeking steps could include talking to a friend, asking a doctor, or calling
an audiologist (Ida Institute, 2009; Laplante-Lévesque, Knudsen, et al., 2012; Manchaiah et al., 2011). Through thematic analysis of small group discussions, Manchaiah et al. (2011) further expanded the patient journey, using a template from the Ida Institute (2009). The authors proposed that hearing aid users work through the main phases of pre-awareness, awareness, movement, diagnostics, rehabilitation, self-evaluation, and resolution. Their study elaborated on some of the actual “next steps” that individuals might take; for example, recognizing the social impact of the hearing loss in the awareness phase. Although the results did expand on the possible patient journey, the study was limited in two ways. First, responses may have been constrained through the use of the Ida Institute template which assumes that clients think of hearing health as a linear process, centred on getting a hearing test. Second, only the perspectives of people who used hearing aids were gathered, and not those who chose other options or pathways.

There is an unfilled need to explore the process of hearing health change. Delineating the needs, knowledge, and goals of older adults – and not just those who have sought help – is integral to finding a better understanding of how to encourage hearing health change. The role of the dissemination of relevant information is one topic that is of interest within this area.

1.2.4 Information-sharing.

One need that is understood as being integral to the process of behaviour change is appropriate access to information. Winsor (2011) noted the importance of access to trusted information for those individuals making decisions about hearing health, and the need for further study in this area. Thus, understanding more about information-gathering and adult learning regarding health care knowledge is important for understanding how to support hearing health change.
Information-sharing can be thought of as the provision of educational information for the purpose of increasing knowledge of a problem or issue, and for raising awareness of the options and services available. It is generally believed that providing relevant information may help an individual to make informed choices for the betterment of his or her own health by improving health literacy and supporting self-management of a disease (Cooper, Booth, Fear, & Gill, 2001; Mazzuca, 1982; Nair & Cienkowski, 2010). Both of these areas are discussed below.

**Health literacy.**

Health literacy is defined by the Canadian Public Health Association as “the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life course” (Canadian Council on Learning [CCL], 2008, p. 9). Six out of every ten Canadians over the age of 16 do not have the skills they require to manage their own health and health-care needs (CCL, 2007). In populations of older adults, immigrants, and those who are unemployed, this level is even higher (CCL, 2008). As the number of health services offered through out-patient services increases, people rely more on written handouts, brochures and websites to address their concerns. Unfortunately, this written information is not always appropriate for the health literacy levels of those individuals who receive it. An accessible reading level is considered to correspond to a 6–8th grade reading level. In an evaluation of printed health materials in the United States, Shieh and Hosei (2008) found that of 21 publically available health materials only three (14%) were considered to have suitable readability for the general population.

Within audiology, Nair and Cienkowski (2010) found significant communication gaps between audiologists’ language in counselling, the readability of hearing aid instruction guides, and the health literacy levels of clients. Overall, audiologists counselled at a language level up
to five grade-levels above that of their average client’s health literacy levels. Hearing aid instruction manuals were up to eight grade-levels higher than the average client’s health literacy level. The implications for this mismatch in communication are considerable in terms of both time and money spent by the clinician and client, as well as the client’s satisfaction and opinion of the quality of care received from the hearing healthcare professional (Nair & Cienkowski, 2010).

The readability and quality of internet information sources for adults with hearing loss and their significant others was assessed by Laplante-Lévesque, Brannstrom, Andersson, and Lunner (2012). The internet is an increasingly common source of health information, especially for topics such as hearing loss, which many consider to be stigmatizing (Berger, Wagner, & Baker, 2005; Hunter & Bridger, 2008). It was found that on average people required 11-12 years of education to read and understand the most common websites about hearing loss and hearing aids. This is 3-6 years beyond the general reading level (Laplante-Lévesque, Brannstrom, et al., 2012).

Health literacy level is an important topic in hearing health for a number of reasons. First, health literacy is a predictor of a patient’s knowledge of his or her own chronic diseases. People with lower health literacy scores have less knowledge of their chronic diseases such as asthma, diabetes and congestive heart failure (Gazmararian, Williams, Peel, & Baker, 2003). As hearing loss is also a chronic disease, it is likely that similar principles apply. This could imply that many people with hearing loss cannot access the help needed because of limitations in health literacy. Secondly, to compound the problem, hearing loss’s effects on communication have the potential to further limit improvements of health literacy (Osborne, 2006).
**Information for self-management.**

Many people seek additional information while making health care decisions. Aiding the process of knowledge gathering can “help people help themselves” by providing them the tools to make decisions and maintain control over these decisions (Beckingham & Watt, 1995, p. 484). The use of reliable information is recognized as an important factor in improving self-management by individuals suffering from chronic diseases (Mazzuca, 1982). Actively providing information can ensure the quality and usefulness of the information people receive.

A study by Rawool and Kiehl (2009) assessed the effects of providing brief, individual informational counselling about hearing loss by a minimally-trained presenter. The authors’ findings indicated that for individuals who denied having a hearing loss prior to the intervention, five out of ten with a clinically significant hearing loss accepted the presence of his or her hearing loss following the brief counselling session. Three of these individuals maintained this acceptance over time. These findings highlight the important role that information can play in facilitating the recognition of and potentially the action(s) taken for improving hearing health.

While information can improve one’s knowledge of the possible consequences of a health problem, as well as alter the perception of the feasibility, validity, and effects of management options – important factors in health behaviour changes as discussed above – it can only do so if it is available to the people who need it most. In the case of ARHL, it is older adults with their increased risk and consequences of untreated hearing loss who perhaps most need to hear the information. Following is an example of one of the ways in which information is shared with seniors in the province of British Columbia (BC).
1.3 COSCO: Advocacy and Information-Sharing for Seniors

Taking a proactive approach to information-sharing for the betterment of older adults’ lives is the mission of the Council of Senior Citizens’ Organizations of British Columbia (COSCO; Grosjean, Pither, Kube, & MacLeay, 2009). COSCO has a long history as a seniors’ advocacy group. This has traditionally included lobbying the government for older adults’ health care and general rights, but has expanded to include information-sharing presentations on a variety of topics. This latter initiative has come from the recognition that seniors need good quality, reliable information to help maintain their health and independence as they age (Grosjean et al., 2009). COSCO’s information-sharing system offers an existing avenue through which important information, such as about hearing health care, can be formally distributed to older adults.

1.3.1 COSCO presentations.

COSCO’s first information-sharing presentation was on Falls Prevention, and was released in 2007. By 2010 there were 18 additional presentations on a variety of topics, each 90 minutes long. In the first three years the presentations were attended by over 4000 people in over 200 venues across the province (COSCO, 2012). In 2011 COSCO founded the Seniors’ Health & Wellness Institute, a non-profit entity specifically responsible for the group’s educational presentations. COSCO’s presentations are based on peer-teaching-peer and participatory action learning principles (Grosjean et al., 2009). Along with the founding of the Institute, COSCO officially introduced narratives or case-studies into their newest presentations.

COSCO presentations are facilitated by volunteer seniors from across BC, each of whom is trained on the delivery of each presentation. Presenters are available to deliver any of the presentations to seniors’ groups of any number all over the province, upon request.
The main goal of COSCO’s educational presentations is to help seniors maintain an independent lifestyle, allowing *aging in place* (Grosjean et al., 2009). Aging in place refers to the desire to stay in one’s home or community as one gets older. While the term was found to be unfamiliar to many seniors (Wiles, Leibing, Guberman, Reeve, & Allen, 2012), the sentiment it represents is recognized as a goal shared by many older adults in BC, Canada and the world (Grosjean et al., 2009; Wiles et al., 2012). This goal closely fits with the need to bridge the gap between research and healthy aging, as is made possible by information-sharing presentations such as those presented by COSCO, which emphasize improvement to health literacy. COSCO’s presentations aim to support aging in place by:

- a) Creating change in seniors’ behaviour (i.e., teach, promote and use practices that improve safety and health);
- b) Forming health and safety networks that foster positive communities;
- c) Mobilizing seniors for government and policy lobbying for change.

Sloane-Seale and Kops (2008) noted there are many positive effects of participating in learning as an older adult, including influences to quality of life through physical, mental and/or emotional health, well-being, and personal satisfaction.

In November 2011, several new presentations on a variety of topics were introduced to COSCO presenters, bringing the total number of COSCO presentations to 36. New topics were developed from the suggestions of both presenters and attendees at previous presentations, and included subjects from incontinence to sexuality to *Hearing Health in Older Adults*. For the first time, a number of the presentations were developed by university students in health disciplines related to the topics, in conjunction with older adult mentors in the community, COSCO representatives, and expert mentors in the field. This process of presentation development for the presentation *Hearing Health in Older Adults* is further explained in the Appendix B. The resulting interprofessional and intergenerational collaboration, funded by the Canadian Institutes
of Health Research (CIHR), represented a unique opportunity for students to be involved in an innovative learning and mentorship program about relevant topics related to the care of older adults. While the presentations followed the COSCO ideal of using participatory action learning and peer-teaching-peer principles, formal narrative-learning was a new addition. The use of each is discussed below.

**Participatory action learning.**

The goal of participatory action learning (PAL) is for learning to focus not only on information and awareness, but also to emphasize commitment to change. PAL aims to improve awareness of problems through community engagement, with the intention of supporting groups’ commitment to both individual and social change (Grosjean et al., 2009). For a project to be effectively using PAL, it should:

- directly and actively involve participants in the learning and research processes, ensuring that the project is grounded in the participants’ understanding (and tailored to their literacy level) and experiences
- combine social research and social action in the project through the iterative process of inquiry, intervention and evaluation
- enhance local problem-solving through discourse, dialogue and a respect for collective learning (Grosjean et al., 2009; Silver, 2008)

PAL is the method COSCO has adopted in their approach to older adult education. Both the development of recent presentations and the ongoing delivery of the modules provide opportunities for peer co-learning. The use of peer teaching and peer learning supports PAL. Local social resources that might become apparent through the groups that attend presentations also help to support the development of networks that can address the barriers to change (Grosjean et al., 2009).
**Peer teaching.**

There is considerable research showing the benefits of both peer teaching and peer learning in older adults. Choi (2009) reviewed the literature on senior peer teaching and noted that many older adults find the personal satisfaction, intellectual stimulation, and enjoyment of teaching more than counteracts some of the challenges of teaching older adults. Reported challenges include tailoring content and delivery to a wide range of educational backgrounds and reasons for attending, compensating for the age-related deficits learners may have (i.e., hearing, vision, or memory loss), as well as the ambiguity in the presenter’s role as either educator or entertainer depending on the purpose of the group (Brady, Holt, & Welt, 2003; Choi, 2009). Also, depending on his or her teaching style, the presenter’s role may vary from moderator to referee, activator to therapist (Clark, Heller, Rafman, & Walker, 1997). These varying roles highlight the many skills that peer teachers must draw upon to effectively lead older-adult learners.

COSCO presentations are led by trained volunteer seniors from across BC. Originally, presenters were recruited based on their active involvement in their communities; each was already recognized as a leader of his or her peers (Grosjean et al., 2009). To provide more formal structure – and in recognition of the varied roles and skills required of their presenters – COSCO offers week-long intensive training sessions. Training includes examples of:

- delivering the content of each presentation
- strategies to help individuals commit to apply the information to improve quality of life
- tailoring the presentations to diverse seniors’ groups

Presenter training includes how to assist individuals in committing to actually using their new knowledge. Presenters understand that the aim of the presentations is for the new information to be used to improve attendees own quality of life or to help someone else.
Peer learning.

Sloane-Seale and Kops (2008) found that older adults who participated in learning opportunities do so (a) for the sake of learning, (b) as a means of socializing, and (c) to achieve a specific goal. Peer learning supports these goals by providing an opportunity for people to both teach and learn from each other, drawing on the collective expertise and experiences of those with similar knowledge and ability levels.

Many benefits of peer learning have been recognized. Learning from peers can enhance one’s own knowledge on a variety of topics, some of which may improve both general and health literacy. Gatherings of peers might also be a source of social connection for many older adults and may enhance social and communication skills. Peer learning may also result in increased feelings of control (self-efficacy), improved quality of life, and support of academic achievement; overall, a skill set that helps maintain independence to successfully age in place (Grosjean et al., 2009; Herzog, Franks, Markus, & Holmberg, 1998).

Several characteristics of peer teachers and learning groups have been noted as helpful to learners. Firstly, learning is enhanced when the peer helper does not hold authority over fellow learners. This balance of authority might make self-disclosure of previous misconceptions or ignorance more likely to occur. This might provide an opportunity to address and correct erroneous information (Herzog et al., 1998). Additionally, the helper (i.e., COSCO presenter) may act as a role-model of enthusiasm and competence, and embody the possibility of success. Each of these traits might help to improve the learner’s self-confidence. The use of peer modeling is a topic of interest, especially in the Social Cognitive Theory (above). Finally, a sense of loyalty and accountability might also develop between members of the group (Topping, 2005), which might also contribute to creating networks that support health behaviour change.
Narrative-based learning.

Narratives and stories are an inherent part of all cultures; as humans we use narratives to make meaning out of our experiences (Clark & Rossiter, 2008). It has been found that incorporating case studies or stories into learning opportunities can improve uptake, comprehension, retention, and application of new knowledge (Owen, Ryall, & Corrigan, 2007 as cited in Frazee, 2012). Listening to stories engages people not only intellectually, but also in “spirit, imagination and heart” as one takes the story, including any new knowledge, and actively connects it to his or her own lived experiences (Clark & Rossiter, 2008, p. 65).

COSCO’s Health and Wellness Institute included narrative-based case-studies in their most recent collection of presentations. The hope was that this would enhance the learning experience and subsequent outcome of the presentations by:

a) Presenting realistic scenarios of older adults making lifestyle changes, experiencing life with a chronic disease, or navigating the health care system in a way that workshop participants could relate to on a meaningful level.

b) Encouraging interaction and open discussion of topics while relieving the burden of having to discuss intimate personal experiences (e.g., incontinence, sexual health).

c) Demonstrating what a ‘collaborative’ approach to health care actually looks like by presenting cases that involve active participation in decision-making on the part of the older adults, and interprofessional teamwork on behalf of health care practitioners.

d) Communicating the information in a manner that is comprehensible and usable to all seniors, regardless of their level of health literacy.

(Frazee, 2012, p. 5)

In a summary of the evaluation of seven of the recently released COSCO presentations, Frazee (2012) found that many seniors reported that the narratives helped make new information relatable and understandable in the context of his or her own life. Frazee’s report is the first formal evaluation of COSCO’s presentations.
1.3.2 Evaluation of COSCO presentations.

As COSCO’s presentations become increasingly available across BC, it is important to assess whether the provision of health promotion information in the form of educational workshops does in fact influence seniors. This could include, for example, seniors’ health decisions and subsequent health status. Although initial goals of COSCO’s health seminars included tracking outcomes (Grosjean et al., 2009), this has not been possible on a large or consistent scale up to this point. COSCO collects data from generic evaluations of each workshop, but as a volunteer-run organization no formal assessment had been done prior to Frazee (2012).

Frazee (2012) used informal questionnaires and written comments in an evaluation of seven new COSCO presentations. The data was gathered at an intergenerational learning event. Seniors rated each of the seven presentations above 4 on a Likert scale from 1 (strongly disagree) to 5 (strongly agree), in terms of both usefulness and relevance to their lives. While there were many constructive ideas for improvement, the presentations themselves were well-received (Frazee, 2012). Frazee’s report officially presents some initial insight, beyond the heretofore anecdotal support, for COSCO and their approach to information-sharing.

In order for COSCO’s workshops to make their maximum impact, it is important to have and use evaluation material. As a volunteer and funding-based agency, any outcome measures that are gathered through valid and reliable means are of interest to both COSCO and their sponsors. The present study seeks to use focus groups to evaluate a COSCO presentation in terms of its approach to health promotion, and its application to hearing health. This investigation will help to provide rich data for COSCO specifically on the Hearing Health in
Older Adults presentation, as well as give suggestions of possible ways to better evaluate the workshops and their impact on seniors’ lives.

1.4 Research Intent

The purpose of this investigation is two-fold. Firstly, the project aims to evaluate the educational presentation *Hearing Health in Older Adults* through focus group discussion. This evaluation will include specifics of the presentation content and design for the purpose of revision. The effective use of focus groups in the evaluation of presentations is of interest to COSCO, as they continue to expand and improve their older adult education efforts and consider efficient and accessible ways to evaluate these presentations. The results from this evaluation of the presentation are summarized in Appendix B.

Secondly, the broader aim of this study is to use focus group discussion as a platform for an exploration of hearing health change from the perspective of older adults. Inquiry will follow the participants’ own words to gain a better understanding of the possible processes, phases, and key factors involved in older adults’ decisions to change hearing health. This second aim, exploration of hearing health change, is the focus of the data and results presented in Chapters Two to Four.
Chapter 2: Methodology

2.1 Introduction

This study used qualitative data collection methods and analysis. Qualitative research is best used in exploratory research and to assess the implementation of a new program (Creswell, 1994; Krueger & Casey, 2000; Morgan, 1998), both of which were relevant to this study. Four minimally-led focus group discussions were held following COSCO presentations of Hearing Health in Older Adults. The data from these discussions were analyzed using the inductive techniques of qualitative description and thematic analysis. Following is an introduction to the research methodology that informed the process, from the design through to the analysis. This is followed by a description of the specific methods that were employed.

2.2 Overview of Qualitative Methodology

Qualitative research is described as “an inquiry process of understanding a social or human problem based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting” (Creswell, 1994, p. 1). Brotherson (1994) states that qualitative inquiry differs from quantitative inquiry in three key ways. First, as opposed to the concrete facts and causes of behaviour that anchor quantitative inquiry, qualitative research recognizes the differences in perspectives that result in webs of interactions that connect factors and events. Second, in qualitative paradigms, contact between the researcher and the respondent is integral to uncovering and understanding the values and beliefs that exist. These then drive theory, problem statements, methods, and analysis. This is in contrast to the objective distance required in quantitative research. Third, understanding phenomena in qualitative inquiry is context-specific and changes with perspective, whereas quantitative inquiry relies on broad and universally applicable hypotheses.
There are many appropriate instances in which qualitative research may be used. Appropriate use includes research scenarios when the knowledge base in an area is small or biased, when hypotheses need to be generated, or when gathering initial feedback on a new intervention (Brotherson, 1994; Morgan, 1998; Morse & Field, 1994; Patton, 2002). With respect to assessing interventions, there is importance, relevance, and value in asking “what is holding you back?” or “what would need to change for you to move ahead?” (Krueger & Casey, 2000; Morgan, 1998). A qualitative paradigm allows respondents to freely address these and other questions. As this study seeks to assess and gain insight about a new educational presentation regarding hearing health, the use of qualitative methods is appropriate and valid.

For the exploration of hearing health, qualitative methods are well positioned to uncover the breadth of participants’ experiences and ideas (Carey, 1994; Powell & Single, 1996). Qualitative research processes are less judgmental than more traditional quantitative approaches; the former recognize the importance and power of the wisdom that people share, acknowledging each person as the messenger of his or her own thoughts and experiences (Brotherson, 1994). This was acknowledged in the present study by gathering data through focus group discussions and analyzing it using elements of both qualitative description and thematic analysis. Overviews of focus group research, qualitative description, and thematic analysis follow.

2.2.1 Focus groups.

Focus groups are recognized as a way of learning about participants’ feelings and experiences while preserving – and in fact making use of – the interpersonal interactions that exist in real life (Krueger & Casey, 2000; Morgan, 1998). Essentially, a focus group is a discussion among individuals about a specific topic (Wilkinson, 1998). Focus groups have been used in a variety of ways in health research: to determine participants’ needs and attitudes, to
help design surveys, to assess the effectiveness of health promotion materials, and to identify obstacles that prevent or discourage individuals from changing behaviour (Brotherson, 1994; Wilkinson, 1998). Wilkinson (1998) suggests that focus groups are an “ideal method for the study of people’s own meanings of health and illness” (p. 333).

While individual interviews are considered the most thorough and straightforward for any one person’s perspective, the interplay between participants is what helps make focus groups valid and rich in their insight (Creswell, 1994; Krueger & Casey, 2000). In this context, validity refers to whether the data contain a true representation of the participants’ responses concerning the topic(s) under investigation (Brotherson, 1994). Through discussion “people answer questions, resolve disagreements and defend their views” even on topics that are seen as socially undesirable and difficult (Wilkinson, 1998, p. 334). This may result in deep and clear explanations of beliefs, knowledge, and experiences that would be difficult to access without the influence of others.

In focus groups a moderator guides a small group of participants in a discussion of the topic(s) of interest, using a predetermined but loose discussion guide or set of questions (Morgan, 1998). The data from focus groups are the participants’ dialogue, which is audio- or video-recorded for analysis. While the moderator poses questions to gently steer the discussion, participants talk to each other as opposed to the researcher. This makes the data an excerpt of everyday conversation delivered in the participants’ own language (Wilkinson, 1998). Unlike other research approaches, focus groups are able to reveal “shared ways of talking, shared experiences and shared ways of making sense of these experiences” (Wilkinson, 1998, p. 335). By virtue of there being more participants than researchers, the research “power” and direction
is in the participants’ hands; this gives participants more opportunity to have conversations that follow their own themes and topics, as opposed to those of the researcher (Wilkinson, 1998).

In the present study, focus groups were used to collect data for several reasons. First, evaluating the presentation depended on groups of seniors first viewing it. Thus, groups that were gathered to see the presentation offered a convenient way to access groups of older adults. The group members then had the viewing of the presentation in common, but also represented a variety of opinions and experiences. Second, hearing loss is a problem that is experienced socially; using focus groups as a means of having older adults talk about hearing health capitalized on the role of social groups in the conversation (Balch & Mertens, 1999). Third, by having older adults collectively talk about hearing health, it was hoped that there would be additional recognition of hearing problems in participants, their communication partners, and society; and, empowerment to seek hearing health change (Wilkinson, 1998).

2.2.2 Qualitative description.

Qualitative description is an analytic approach often used in research to accurately represent facts and experiences using the words of the participants (Sandelowski, 2000). Studies that employ qualitative description stay close to the surface of words and events, as opposed to making inferences or interpreting meaning. This approach is best used to answer such questions as, “what are peoples’ responses (e.g., thoughts, feelings, attitudes) toward an event? What reasons do people have for using or not using a service or procedure?” (Sandelowski, 2000, p. 337). It works well with data collection methods with limited structure, such as individual or group interviews, to gather a broad range of information.

This type of analysis is well-suited to the first aim of this study: using focus group discussions to evaluate the COSCO presentation Hearing Health in Older Adults. Providing a
clear and concise account of the groups’ assessments of the presentation was desired, and it is through qualitative description that this is most readily done.

2.2.3 Thematic analysis.

Thematic analysis, at its simplest, is a way of organizing and describing data in rich detail (Braun & Clarke, 2006). It is flexible in its methodology, meaning it can easily be used alongside other paradigms (e.g., with grounded theory), without the burden of excess theoretical and technical knowledge. In thematic analysis, connections are drawn across an entire data set, such as across multiple interviews or groups (Patton, 2002). These connections may be reports of participants’ experiences, meanings, and realities, or they might be a study of how these experiences, meanings, and realities relate at a deeper level (Braun & Clarke, 2006).

Thematic analysis is a suitable method for the present study for a number of reasons. First, thematic analysis is considered to be a valid and accurate approach that is accessible to researchers who are new to qualitative research methods (Braun & Clarke, 2006). Second, it allows for themes to be generated from the data and subsequently described and interpreted. In this interpretation, themes may be related to broader meanings or implications, or to previous knowledge. Third, thematic analysis gives more weight to the voice of the participant than that of the researcher (Luborsky, 1994).

Through thematic analysis the data from the focus groups were organized, described and analyzed in terms of the participants’ own experiences and words. By taking a semantic approach – that is, not making inferences and assumptions about what was said – this study begins to aid understanding of hearing health change as discussed by older adults.
2.2.4 Summary of the methodology.

The use of an inductive approach to data collection and analysis makes it possible to understand a problem or an intervention in terms of the participants’ own words and realities, without imposing boundaries on the answers. Qualitative data analysis can be used to address specific questions, as well as to identify important themes that influence the questions and areas of interest. The simplicity and straight-forward reiteration of qualitative description and the more in-depth exploration in thematic analysis were incorporated in the present study to characterize and explore the data collected from four focus group discussions that followed viewings of the COSCO presentation *Hearing Health in Older Adults*.

2.3 Reflexivity and Situating the Researcher

In qualitative research, the researcher “is a central figure who influences the collection, selection and interpretation of data” (Finlay, 2002, p. 531). The act of collecting the data and the presence of the researcher will influence and ultimately change the participants and what the participants might contribute. While this is an inherent part of the research process (Brotherson, 1994), maintaining the quality of the study relies on explaining the researcher’s active role and unwitting influence (Finlay, 2002). Each researcher also brings his or her own biases, perspectives, and experiences to the process of qualitative analysis (Finlay, 2002). The qualitative researcher can strengthen the integrity of his or her work by “acknowledging the existence of researcher bias and explicitly locating the researcher within the research process” (Finlay, 2002, p. 536). The remainder of this sub-section is a brief reflection of my perspective, bias, and likely influence on the research process.

My whole academic career I had been taught the “importance of the p-value;” I came to this project considerably more comfortable with hard facts and statistics than with group
discussions and qualitative inquiry. With the transition from a bachelor of science degree in biological sciences to a master of science degree in audiology, my horizons were certainly broadening. When I was first introduced to COSCO and asked to design and develop a presentation on hearing loss, it was a welcome opportunity to think about hearing health in a holistic sense.

With the completion of the presentation, I found I wanted to follow it further, to find out whether the knowledge imparted would have any impact on those who viewed it. It is part of COSCO’s mandate to support and encourage change through its presentations, but I wanted to know what we could actually expect people to do with the information, what next steps people would take. This interest directed both the design and the delivery of the focus groups, and as such biased my thinking, my expectations, and likely also influenced the participants (e.g., in what questions were asked).

Although my role as researcher was minimized by having others facilitate the presentation (COSCO) and moderate the discussion, my presence undoubtedly had some influence on how and what was said by the participants. I was introduced as an audiologist, and my name appeared in the acknowledgements for the presentation, which showed an association to the presentation. The groups occasionally wanted to access the expertise that this implied, as was shown by questions being addressed directly to myself and/or my supervisor. Field notes were used to record personal feelings and reactions that influenced individual thinking, but the act of taking the notes may have also affected participants. My direct involvement in the focus groups as the organizer and notetaker was necessary and important to the research process, but my appearance and involvement likely affected the participants and our interactions.
2.4 Methods

Initially, the goal of this study was to evaluate the COSCO presentation *Hearing Health in Older Adults* using four to six focus groups. Upon further reflection on the hearing health literature it became apparent that there was a need for a deeper understanding of hearing health behaviour change in older adults. These focus groups were then seen as an opportunity through which such a discussion could take place. What follows is an overview of the procedures used to recruit participants, gather data through focus group discussions with older adults, and analyze the data to best explain and represent the dialogue that ensued.

Throughout the remainder of this work, “the event” is used to encompass the entirety of the time each group was together. Each event included the separate stages of: (a) the *Hearing Health in Older Adults* presentation, (b) a break for set-up of recording equipment and refreshments, and (c) the focus group discussion.

2.4.1 Presentation.

A detailed description of the *Hearing Health in Older Adults* COSCO presentation and its development appears in Appendix B. This presentation was created using several sources, including a University of British Columbia Care for Elder’s module for physicians; up-to-date literature; discussions with senior COSCO members; consultation with a senior, community-based mentor; conversations with other hearing health professionals; and, feedback from Intergenerational Learning Day (i.e., with students, people who work in health disciplines, and seniors). The presentation was billed as follows:

Hearing loss can have an impact well beyond problems in conversation, and it is important to help yourself and others communicate the best you can! To answer many common questions about hearing loss and communication, topics include preventing hearing loss, recognizing hearing problems in yourself and others, as well as suggestions for approaching others about their hearing.
The presentation length ranged from 60-90 minutes and used Microsoft Office PowerPoint. It followed the principles and guidelines that COSCO has in place for their health literacy presentations, including formatting, content progression, and use of a narrative case study. It was delivered by COSCO-trained presenters who did not have particular training or experience in hearing health. Further details on its development can be found in Appendix B.

2.4.2 Recruitment.

Ethics approval for this study was granted by the UBC Behavioural Research Ethics Board. The target population was older adults in BC who self-selected to attend the COSCO presentation *Hearing Health in Older Adults*. Convenience sampling was necessary, as the location of presentations scheduled for data collection was constrained by proximity to the Greater Vancouver Regional District. To ensure adequate study sites over the limited time frame, active recruitment of locations and participants occurred.

The first two focus groups (FG1 and FG2) were organized through COSCO. Participants in these two groups were older adults from the community who had previous training and experience delivering COSCO workshops and may have previously seen the content of this presentation. The final two focus groups (FG3 and FG4) were coordinated with programmers of local seniors’ and community centres. Participants in these final two groups were community-dwelling older adults with no known association to COSCO. For all locations, prospective attendees were invited through email, telephone, general fliers, or in person to take part in one of two ways: seniors could either attend only the presentation or stay for the whole event, which included the presentation, followed by the focus group discussion. The first eight people who replied at each location were sent a follow-up package by email or mail which included an overview of the event and the Informed Consent Form (see Appendix C). Due to small response
numbers at FG3 and FG4 further participants were recruited for the focus group discussion at
the time of the presentation. FG1 and FG2 were initially considered pilot sessions; when no
significant changes to methods were needed, both were included in the data set (Webb, 2002).

The informed consent form was read and signed by each participant. It outlined the risks
and responsibilities assumed with participation in the focus group discussion. Participants were
encouraged to ask questions about the research, and were reminded of the option to withdraw
from the study at any time. At several points throughout the discussion, participants were also
urged to maintain privacy and confidentiality. As noted by Morgan (1998), confidentiality is
difficult to ensure in groups, especially when the members are acquaintances.

Participants.

There is considerable discussion in the literature about the most desirable characteristics
of focus groups and their participants. Both support for (e.g., Kitzinger, 1995; McLafferty,
2004; Powell & Single, 1996) and against (e.g., Altman, 1973 and Altman & Taylor, 1973 as
cited in Nelson and Frontczak, 1988; Fern, 1982; Kruger & Casey, 2000) acquaintance of
participants can be found. Perceived homogeneity of participants has also been noted to enhance
disclosure (e.g., Morgan, 1998; Thomas et al., 1992); Kruger and Casey (2000) suggest that
people decide to reveal beliefs, thoughts, and experiences based on the perception of being
similar in some way. Being alike also reduces the chance of inequalities of power and
experience that can negatively influence who participates and what is shared (Krueger & Casey,
2000). Others argue that the main concern with group composition is finding the target group
with compatible participants and keeping the participants involved (Morgan, 1998). There are
also differing opinions on effective group size (4-8 people, Kitzinger, 1995; 5-12 people, Kruger
& Casey, 2000; 6-10 people, Powell & Single, 1996) and number of groups (3-12 groups,
Krueger & Casey, 2000; 3-5 groups, Morgan, 1998). Ultimately, the complexity of the topic and the amount of data required to adequately explore the area should define decisions about both group size and number (Krueger & Casey, 2000; McLafferty, 2004; Morgan, 1998; Powell & Single, 1996). For example, for a complex topic with a large number of discussion points more groups might be needed than for a relatively narrow and straight-forward area. In terms of group size, there is a fine balance between having too few people to support an active and varied discussion and being unable to hear contributions from everyone present.

For this investigation, the target group size was six to eight older adults. This group size was desired to capitalize on a breadth of experiences and views while allowing the moderator to maintain focus. Although participants were not purposely selected based on acquaintance with each other, hosting the events within an organization (COSCO) and public (seniors’ and community) centres with formal programming for the target group reinforced this occurrence. Four group discussions were considered an appropriate number to efficiently gather a wide range of data. A total of 27 older adults (23 female and 4 male) participated in four focus group discussions which followed the COSCO presentation Hearing Health in Older Adults.

2.4.3 Data collection.

Upon arriving for the Hearing Health in Older Adults presentation, those attendees who elected to participate in the focus group received instructions for the event. The events began with a general welcome to those in attendance. Each presentation and focus group was attended by me as researcher, my faculty supervisor who was an audiologist and researcher who also oversaw the development of the presentation, and the focus group moderator. In the introduction each individual was introduced, and the purpose of the event and subsequent schedule were
stated. The schedule included the presentation, refreshments and a short break, and then approximately one hour for a small group discussion, for those who elected to stay.

The Hearing Health in Older Adults presentation was delivered by a trained COSCO presenter following COSCO’s standard peer-teaching-peer format. In the first two events, FG1 and FG2, the presenters also participated in the focus group discussions. In both FG3 and FG4, the presenters did not stay for the focus group discussions.

Following the presentation there was a brief break for refreshments, and for set-up for the focus groups. At that time, participants who were staying for the discussions completed the Informed Consent Form and the Demographic Questionnaire; all others who chose to attend only the presentation departed.

Demographic data were collected to generally characterize each focus group. The Demographic Questionnaire (see Appendix D) included self-report questions about age; gender; living arrangements; culture; time since onset of hearing problem, if present; education; eligibility for subsidized hearing care; socioeconomic status; and, employment history. These characteristics have previously been found to be associated with hearing health care outcomes (Laplante-Lévesque et al., 2011; Milstein & Weinstein, 2002). In addition, it incorporated a validated questionnaire about the individual’s hearing status, the Hearing Handicap for the Elderly-Screener (HHIE-S; Weinstein, 1986). The data obtained through the questionnaire were gathered anonymously.

Focus group participants gathered in the space that was available for the discussion. The aim was for the setting to foster feelings of openness, encouragement, permissiveness, and easy communication (Krueger & Casey, 2000; McLafferty, 2004). In all cases the discussion took place at a table or tables within the same room as the presentation.

1 The HHIE-S is used with written permission from the author.
Background noise was minimized when possible and chairs were placed in a circle or rectangle so everyone could be seen by each participant. These steps were important for two reasons. Firstly, this arrangement supports cohesiveness and trust for the sharing of experiences, and possibly self-disclosure. Secondly, it was expected that at least some participants would have hearing difficulties and this arrangement would maximize available visual cues (Balch & Mertens, 1999).

The group discussion was digitally-recorded in its entirety for transcription and analysis. The moderator opened the discussion by having each participant state his or her first name and, at her discretion, also proposed an ice-breaking question. The moderator helped to keep the discussion flowing, while trying to allow the discourse to progress to answer the study questions as naturally as possible. The Discussion Guide can be found in Appendix E. It included non-leading questions or comments designed to stimulate discussion of the topics of interest in the small group, as needed. General questions led into more specific topics, as suggested in the literature (McLafferty, 2004). Introductory questions were designed to evaluate the presentation itself. Questions placed towards the end included the next steps, if any, attendees thought future attendees of the presentation might consider and the barriers and facilitators for these next steps. Some questions were designed to provide insight into willingness to change, such as that assessed by the University of Rhode Island Change Assessment (URICA) scale (McConnaughey, DiClemente, Prochaska & Velicer, 1983). At the completion of the discussion, the moderator made an oral summary of the key points generated in the discussion, which was agreed upon or added to by the group.

In all discussions the audio recordings were supplemented with both field notes, which were completed at the events, and memos, which were added after event completion.
2.4.4 Data analysis.

It is imperative that data gathered through any method be analyzed in a way that is practical, systematic, and verifiable for the results to be accurate and valid. The data analysis plan suggested here was drawn from Braun and Clarke (2006), Hennink (2007), Krueger & Casey (2000), and Patton (2002). It is important to note that analysis, while following this process, began immediately after the first group was completed, and continued after each subsequent discussion. It was also adapted as needed to support the analytical process. In this way, investigation was iterative and fluid, as data collection and analysis were simultaneous, adaptive, and ongoing.

The initial stage of data analysis was data preparation. This included verbatim transcription of the recorded discussion, including speaker identifiers and markings for verbal cues. The Key of Transcription is found in Appendix F. All information that might identify an individual or group was removed to ensure confidentiality. Accuracy of the transcript was assured by having both the researcher and a graduate research student listen to the recordings and follow along on the transcripts, making any changes as needed. By doing both the transcription and the review, the researcher reinforced her familiarity with the data (Braun & Clarke, 2006).

Once the data were appropriately prepared, re-reading of it occurred several times (Carey, 1994; Patton, 2002). During the first reading each transcript was marked with initial thoughts of topics, questions, and themes, which were used to prepare preliminary lists of codes and patterns.

Next, the data were segmented into more manageable units. To do this, it was necessary to determine a method to do so. The decision of how to divide the data into meaningful units was
supported by re-reading the transcripts (Braun & Clarke, 2006; Kidd & Parshall, 2000). Initially, segmentation began with the line-by-line separation of thoughts that could have one or more codes applied to them (similar to Kidd & Parshall, 2000). Upon re-examination of the segmentation, a segment was more accurately defined as the text that related to one complete thought or topic; this was sometimes determined by the changing of a speaker, while other times several speakers’ contributions belonged in the same segment.

Once segmentation of the data was complete, coding and analysis began. Coding involved careful thought about each segment, and how each segment could be briefly summarized. These summarizing phrases were the *codes*. Subsequent analysis of the segments and their codes took two different forms, as described below.

**Round One:**

A colour-coding system was used to organize the segments into groups. Initially, these groups were based on the questions in the Discussion Guide, as suggested by Powell & Single (1996). Next, segments were grouped according to topics that were identified from the discussion data segments and the codes (Braun & Clarke, 2006; Powell & Single 1996; Sandelowski, 2000). These groups of topics were documented in photographs and were then organized in text documents. The use of both the questions and topics was helpful in becoming familiar with the data, but did not allow for connections to be easily drawn across groups and questions. For this reason, analysis was adapted in a second round.

**Round Two:**

It was determined that further distance from the discussion questions was needed to continue to deepen the analysis. The preliminary codes (or summaries) were compiled into a text document and arranged by topic, category, or pattern (Patton, 2002). The codes within each
topic, category, or pattern received several rounds of review, and were rearranged according to multiple re-readings and interpretation of the original transcript data, as suggested by Braun and Clarke (2006) and Patton (2002). Through continued reflection and rearrangement of the topics and sub-topics, categories, and patterns, themes and subthemes were refined and subsequently named (Braun & Clarke, 2006). By the end of Round Two, data were analyzed across topics, categories, and patterns to identify over-arching themes and sub-themes regardless of which focus group or question brought about the answer.

2.4.5 Summary of the methods.

Analysis of the data from four focus groups used an inductive process to identify the topics and themes raised by the participants themselves. This process avoided imposing boundaries on the topics and themes found. These topics and themes, along with preliminary interpretation, are presented in the next chapter.
Chapter 3: Results and Interpretation

3.1 Overview

This study had two intentions or aims to accomplish through focus group discussions with older adults. First, the discussions were to be used to evaluate and refine the presentation *Hearing Health in Older Adults*. The results specific to this aim are presented in Appendix B. Second, the discussions were to be used to explore perspectives about hearing health change. The results specific to this aim are the focus of Chapters 3 and 4.

Each participant was recruited for the focus groups through his or her attendance at the COSCO presentation *Hearing Health in Older Adults*. It is therefore difficult to separate the role of the presentation from that of the focus group, and the impact of the two together. Because the discussion guide questions and the participants’ responses were centred on the topic of the presentation, it is presented with the same frame of reference here. This has been done with the knowledge that participation in the focus group likely also affected the participants’ perception of the presentation.

When older adults in focus groups were asked about hearing health change, the dialogue that ensued was varied, yet had several common threads. The first two focus groups, FG1 and FG2, were attended solely by COSCO-trained presenters. Subsequently, the dialogue in these groups included a slightly different perspective than the final two groups: FG3 and FG4 were attended by older adults from seniors’ or community centres with no association to COSCO. As a result of this difference, the majority but not the entirety of the content in Appendix B, the evaluation of the presentation, is drawn from FG1 and FG2.

The remainder of the discussion content from all four of the focus groups comprised the data for the thematic analysis of hearing health care perspectives. Through inductive analysis
and interaction with the data, five central themes emerged. Every theme was supported by contributions from each focus group. Many subthemes and topics were identified within each main theme. Each of the themes, subthemes, and topics are expanded in this chapter, following a brief description of the focus groups themselves. This initial description includes characterization of the groups and the event proceedings to provide the context in which the data were collected and interpreted.

3.2 Context of the Focus Groups and Interpretation

3.2.1 The focus group events.

Demographic data were gathered from questionnaires completed by the focus group participants. The template for the Demographic Questionnaire is found in Appendix D, and the results are summarized in Appendix G. Following the self-reported demographic data, descriptive explanations are included to help the reader understand the unique aspects of each group and each group’s discussion. These descriptions are drawn from the transcripts, as well as field notes, memos, and recollections of the events.

Nine individuals attended FG1 (8 women and 1 man), ranging in age from under 65 to above 80. Questionnaire data were collected for seven of the nine participants. Self-reported hearing impairment was reported in two ways: a single question and the total score from the ten-question screening questionnaire, the HHIE-S. In this group, four individuals answered “Yes” to having difficulty hearing; the HHIE-S results suggested a severe handicap for one participant, mild-moderate handicap for two participants, and no handicap for the remaining four individuals. The most common reason for attending this presentation was for general interest (5), while two participants reported attending because of concerns for someone else’s hearing.
Each of the participants of FG1 was a volunteer presenter with COSCO, and was well-acquainted with the rest of the individuals in attendance. Individuals in this group were specifically recruited for their perspective as COSCO presenters. As a result, some of the topics raised in this group were specific to the presentation format, and were clearly given from the perspective of someone planning to deliver the content. This included questions targeted at gathering more knowledge about what future attendees of the presentation might ask about, such as when to see an Ear, Nose and Throat doctor (ENT) and unsafe noise levels. Discussion also included many topics about hearing health. The group members discussed such things as personal experiences using hearing aids (2), tinnitus, advocating for safety measures in public places, and the challenges in persuading others to get help.

Nine individuals attended FG2 (7 women and 2 men). Questionnaire data were gathered for seven individuals. All participants reported being between 65 and 84 years of age. When reporting self-reported hearing impairment, five individuals answered “Yes” to the single question regarding having difficulty hearing. This finding is in contrast to the screening questionnaire, the HHIE-S, results where only one participant’s scores suggested a mild-moderate handicap and five suggested no handicap, and one did not complete the questionnaire. The most common reason for attending this presentation was for general interest (4), while three participants reported attending because of concerns for his or her own hearing, and one for concerns with someone else’s hearing.

Like FG1, the participants of FG2 were all COSCO-trained presenters. Individuals were less acquainted than the participants in FG1. Much discussion was generated within the presentation itself, which resulted in the presentation taking almost two hours. As expected given their association with COSCO, several topics raised in FG2 were specific to the
formatting and detail of the presentation. In particular, discussion around the case study questioned how to lead the presentation and generate discussion of personal experiences. Other topics about hearing health were raised, including the ethics of hearing health professionals and their affiliation with companies; the need for specific examples of trusted places to seek help; the importance of all parties trying to aid communication; personal experience with other people with hearing loss; and, assistive devices.

Five individuals participated in FG3 (4 women and 1 man). Questionnaire data were gathered for all but one female participant. All participants were between 65 and 79 years of age. In this group, one individual answered “Yes” to the single question regarding whether they had difficulty hearing, while all four results of the HHIE-S screening questionnaire suggested no handicap. Because these participants had not chosen to attend this event prior to attending the presentation, their answers to “reason for attending” are not reported here.

FG3 was different from any of the other focus groups in that it was arranged on relatively short notice. It took place in a community centre, and was attended by people who attend seniors’ events at that location. Many people attended the presentation, but few stayed for the focus group. Those who did stay for the focus group were well-acquainted, and were eager to share insight and experiences about hearing health in the discussion. The interactions in FG3 were also different from the other groups in that it was not unusual for thoughts to be started and finished by different people. The group’s awareness of issues surrounding gender and ageism, especially, were of note.

Six women attended FG4. With the exception of one participant who was over 85 years old, all participants reported being between 70 and 84. In this group, five individuals answered “Yes” to the single question regarding having difficulty hearing; the HHIE-S screening
questionnaire results suggested a severe hearing handicap for one individual, mild-moderate handicap for three individuals, and one participant did not complete the question. The most common reasons for attending this presentation were because of concerns for one’s own hearing (5) and general interest (4).

In contrast to other groups, each participant of FG4 at some point in the event claimed to have concerns for her own hearing. The participants were acquainted with each other, as each was a member of the same seniors’ centre. Among the topics that this group discussed were the limitations of hearing aids, the need for people with normal hearing to see the presentation and learn about hearing loss, and wax care. FG4 was a particularly difficult setting; there was considerable background noise, and most of the people in attendance had – or suspected having – hearing loss, which likely affected the discussion.

3.2.2 Summary of the context.

A total of 27 older adults (23 female and 4 male; two females attended both FG1 and FG2 and are counted once in this total number) participated in four focus group discussions which followed the COSCO presentation Hearing Health in Older Adults. While the participants reported a variety of backgrounds, the most common characteristics of the participants were as follows: aged between 70 and 79 (11); own their place of residence (14); live alone (15); completed university (14); unsure of their eligibility for hearing care funding (6); and, attended the event for general interest (14). The overall hearing status of participants was more difficult to quantify; eight results on the HHIE-S screening questionnaire suggested mild-moderate or severe handicap, which is in contrast to 14 participants answering “yes” to the single question regarding having noticed difficulty hearing. Of those who reported difficulty hearing, most (12 of 15) stated they had noticed this difficulty for more than one year.
Although some of the discussion in the first two groups was about the presentation content and design, and clarification specific to the perceived needs of future audiences, the remaining dialogue about hearing health did not differ notably from the final two groups. For this reason the following interpretation does not differentiate between contributions from COSCO or non-COSCO groups. What follows in this chapter are the results of the thematic analysis of the data.

3.3 Interpretation of the Focus Group Data

Following attendance at the presentation *Hearing Health in Older Adults*, older adults participated in a focus group discussion. The discussions were loosely led by a focus group moderator who had questions to ask that were designed to initiate conversation about hearing health change in older adults. Across the four groups, the dialogue that ensued followed several themes that were found through iterative and inductive analysis. Five main, interrelated themes emerged from the data and are individually discussed below. The first four themes are Recognizing and Admitting, Understanding the Options, Sharing Stories and Experiences, and Barriers and Facilitators. The fifth theme The Presentation stands alone but is also pervasive throughout the discussion of each other theme. The themes and sub-themes are shown in Appendix H.

Throughout the next section, the words of the participants are included to preserve the original intent of the speaker and to allow the reader to draw his or her own conclusions about what the participants shared in the discussions. The direct quotations are formatted following established conventions (Puchta & Potter, 2004; Silverman, 1993). These conventions are expanded in Appendix F, but three rules are important to note here. First, ellipses (...) are used to indicate the removal of text. This conserves space and removes distracting or unnecessary back-channelling, revisions, filler, or unrelated content. This is done with careful attention to
maintaining the original meaning. Second, line numbers are included with each quotation, indicating where the excerpt begins and ends in the transcript. Third, the speaker is identified with either M for the focus group moderator, or Px, where “x” refers to the specific participant.

Selected results are presented below, with separate sections for each theme, sub-theme, and topic, as applicable. It is the researcher’s intention to present her interpretation of the themes that emerged from the words of the participants.

3.3.1 Recognizing and admitting: “They all know they don’t hear very well”

The first theme that emerged from the data was the role of Recognizing and Admitting hearing loss. Participants made a distinction between two stages of recognizing and admitting hearing loss, and emphasized the necessity of each to occur for people to become open to hearing health change. It is my interpretation that recognizing and admitting could perhaps be distinguished as representing a transition from an internal recognition of a problem, to an external or outward admission of the problem’s impact.

“You need to recognize it first of all”

Recognizing hearing loss was noted as the first step towards making changes for improved hearing health:

M: So do you think after going to the presentation there are specific steps that people might take?... What do you think they might do?
P2: You know, that you need to recognize it
(FG3: 861-870)

In the discussions, there was an interesting dynamic surrounding the ability to recognize hearing loss. Some participants suggested that on occasion recognizing hearing loss is dependent on the input of others. One participant related several times how, because she lives alone, she had not noticed a problem with her hearing until someone else brought it to her
attention. In the following excerpt, this participant’s response was shared through the moderator’s question of whether any specific groups of seniors would benefit from seeing the presentation:

P5: People who live on their own.

... 
M: So, (P5), when you say people who live alone why do you say that?
P5: Well because when you’re living alone you may not know that you can’t hear people heh heh
P6: Oh I think your friends would tell you heh heh
P5: No, but I mean... they’re saying more and more there are all these people (in the paper today), people living solitary lives... and if they’re not being exposed to other people much, I mean, even the fact that I, my neighbour told me my television was loud... I didn’t realize... I didn’t realize until he said it. So that sort of thing. I mean the isolated, or the solitary people.

(FG1: 1199-1216)

In the same vein, when discussing what people wanted to learn from the presentation, the first response was often similar to “they want to know... when you need help” (P1, FG1: 388), or “can you hear, or can’t you and what degree can’t you hear or can you” (P6, FG2: 425). Several participants specifically wanted more information on the signs and symptoms of hearing loss, such as “things to watch for” (e.g., P6, FG3: 475). These examples suggest that, in general, more information is needed for people to be able to recognize the presence of hearing loss.

Related to this topic of not recognizing hearing loss in one’s self was the idea that hearing loss might be “easier to recognize in others” (P2, FG3: 708). The ability to recognize hearing loss in others is related to the theme of Barriers and Facilitators, which is discussed later.

“Trust me, they all know...”

Recognition of a problem is not the only step necessary to enable change for improved hearing health. As the following quote demonstrates, participants also noted that change depends on the individual actually admitting to self and others that a problem has been noticed:

M: ... What would encourage them (to get a hearing test) and, like would it happen right away or is it something you think would take a while?
(pause)
P7: My suspicion would be they have to already be on the verge of getting ready to admit that they might have a problem... Sort of like an alcoholic who has to be down on the floor before they... maybe are ready to look for help.
(FG1: 1083-1093)

In contrast to the opinion that people with hearing loss might be unaware of the problem, was the belief by some participants that everyone is aware of his or her own hearing ability. For example, when asked what attendees of future presentations will know about hearing health, one participant answered “Well, I think they would know their own hearing. That it’s not as good as it used to be...” (P2, FG3: 288-289). This belief was expanded by another group to include being aware of hearing loss, but perhaps in denial about it: “Trust me, they all know they don’t hear very well... They know, whether they want to admit it or not” (P2, FG1: 1351-1353). These comments suggest that people with hearing loss do in fact recognize the problem, but might not readily admit it. This discussion lends support to the thought that for change to occur one must not only recognize hearing loss but also admit that it has an impact on his or her quality of life. Perhaps these two steps can be distinguished by seeing recognition as the internal acknowledgement of a hearing problem, and admitting as a transition to external or outward disclosure. The next sub-theme addresses the impact of hearing loss in a broader sense.

“It’s a… hidden disability”

The theme of Recognizing and Admitting hearing loss also has a larger significance, beyond that of individual hearing health challenges. This greater significance is related to the lack of attention paid to hearing loss by society in general, as reflected by how little it is talked about. This was captured in the following statements:

M: Is there anything about hearing loss that you’d like to learn
P2: It’s just, it’s not a subject a lot of people talk about, right?
(FG3: 768-772)
M: How much do you think people (would) know about hearing loss before coming to the presentation today? ...
P3: Ah, well,... I can’t give you an answer on that because... I never discussed it with anyone that does not wearing hearing aids what they (are expecting to know)
(FG4: 175-187)

P7: I just have been thinking about the difference between having vision problems and having hearing problems.... because I think that the hearing problems are very much more in the closet ...
P6: Well, it’s a ... hidden disability
(FG2: 869-876)

Related to this topic, several groups questioned the lack of funding for hearing health available through the government. This might be seen as lack of interest, or lack of acknowledgement and understanding of the more subtle impacts of hearing health of the elderly:

P2: Do you think... that the government should play a little bit of a bigger part in this? (pause)
P1: They do and they don’t.
P2: I don’t know what they do
P1: They pretend to with sound issues and... loud noises and then they completely ignore it... more or less in the medical field
(FG3: 1510-1519)

Once hearing loss is recognized and admitted several positive things might occur. It might validate problems that the person had noticed but had not yet attributed to a hearing loss. This was captured in a statement, echoed by several people, that “I’m really not nuts, I can’t really hear” (P8, FG2: 850). It might also lead to people talking about hearing health, which is further discussed with the theme Sharing Stories and Experiences, below. Finally, by recognizing and admitting a hearing loss, an individual might then start asking questions and looking for information that will help to develop an understanding of what it is possible to actually do to improve hearing health. This act relates to the second theme, Understanding the Options, which is discussed next.
3.3.2 Understanding the options: “What to do about it”

When asked what people want to learn from a presentation about hearing health, several participants listed things that he or she thought people would be seeking. After how to recognize hearing loss in oneself and others, the common answer was “what to do about it” (P6, FG2: 425). That this question was asked suggests two possible conclusions, both of which were discussed by the participants. One conclusion is that people realize that there are next steps that can improve hearing health. The second conclusion is that there is a need for information about the process of hearing health change; people don’t know, or aren’t confident in what they know about hearing loss and its treatment. Within the theme of Understanding the Options there are several sub-themes that are expanded below.

“See your family doctor first”

One sub-theme within this theme is who to talk to about hearing health concerns. There was general consensus in each group that the family doctor was the first person to see if a hearing loss is suspected:

P1: I feel the number one thing is see your family doctor because of the fact that I had this huge plug of wax... for years and I didn’t ever really think of it, I just thought the whole thing was hearing loss so I think that’s a good place to start (FG4: 463-467)

P6: Um (pause) there needs-a clear direction. See your family doctor and get advice on where to go. I would say that that would be the most vital. (FG1: 891-892)

Although doctors were considered the best place to start seeking help, participants viewed doctors as having very specific and limited roles to fulfill. In the previous two examples, the family doctor was suggested to check for and remove wax, and for advice on where to go or who to see next. This limit in the doctor’s expected involvement was likely reinforced by the lack of dialogue noted between older adults and their doctors about hearing health:
P5: Yeah, I never complained about my ears to my doctor.
P4: Most of us haven’t
...
P5: And uh I don’t know he said nothing….
(FG4: 163-167)

It was also noted that even if there is discussion with a family doctor, it might not be as productive or helpful as is expected or needed, perhaps because of limitations to the family doctor’s knowledge about and experience with hearing health:

P2: Because you’d think a doctor would be much more, like I mean that’s kind of the first place we go
P1: But think… just do sort of preliminary sort of vision and they sort of look at you and knock your knee, and you know look in your ear and
P: Oh yeah
P1: So very...
P2: But sometimes that tends to put you off-
P1: -Yeah
P2: by just - I think one of the people already said that, where they just say oh well, it’s part of
P1: It’s part of aging. There is that too.
P2: (Just because they’re older)
P4: That’s a lousy doctor… I mean it depends on the doctor
P2: Yeah
P1: Yeah, the doctor
P2: (cop-out)
P3: Even so, my doctor he said to me, you think… we knows everything just because we are doctor? They are human beings aren’t they?
P2: No no no we’re talking about something specific though like your ears-if you’re telling your doctor about you might have a hearing problem
P4: That’s why you go that’s why you go to a specialist now
P2: (pause) I know, my doctor did refer me to the clinic at the... (hospital) it wasn’t one of those hearing aid places
(FG3: 65-93)

As is demonstrated in this final quotation, doctors are expected to suggest or refer patients to a trusted hearing health professional. While this was clear, opinion varied as to who this professional should be.

“Where can you go?”

As suggested above, once a discussion with the doctor has taken place, the expectation is that he or she will recommend or refer the patient to someone with more specific knowledge
about hearing health. The biggest tension that occurred over the four focus groups was around this sub-theme of expertise and professional motivation that determines “where can you go?”

Participants specifically mentioned the importance of a professional’s qualifications in receiving appropriate diagnosis and treatment, especially in the first attempt at seeking help:

P6: But perhaps we should make a slight mention that… the qualification’s extremely important to getting the right diagnosis. Because like as I say there’s ads everywhere, in seniors um local newspapers, in their communities about come and get your hearing tested for free and... these are not the people you want to see. For your first, initial (pause) go. So I don’t know how you would, without, using a... brand but... it’s really extremely important that first initial contact is with a professional.

(FG2: 304-311)

A number of participants questioned the relevance of knowing about the professionals’ qualifications (P1, FG1; P4, FG2), but it was generally agreed that at least some knowledge of this topic was important, to emphasize “buyer beware” (FG2: 297, 651). This topic of questioning professional motivation, especially in relation to “hearing aid places” and making payments for hearing health was demonstrated in the following:

P5: I was going to say, wouldn’t it be wise to, if you are... suffering hearing loss to automatically ask for a referral to an ENT, I wouldn’t go to a, um hearing specialist, what do you call them, the hearing aid specialist first. I’d go the route of the professional, of the medical because P2: that would be the easy simple thing to do
P5: My... idea is that if... I’m not paying for the service, then I feel I get more of an honest answer.

(FG1: 211-217)

On the same topic, in several groups, specific hearing aid clinics were explicitly identified as being well-respected and good places to go. The participants noted the importance of understanding clinic differences and being cautious about where to seek help, and subsequently thought this information was important for future attendees of the presentation:

P2: I don’t know how you do that because I mean, it’s like social planners graduating from UBC or something like this, they all end up working for municipalities and they all end up compromised. Like it’s difficult as an audiologist, an HIP a speech pathologist whatever whatever ‘cause you
P6: You have to (hook up somewhere)
P2: You’ve got the private sector out there, right? And I-it’s up to you how you do it, but I think it’s really important (to get that message out there)
(FG2: 727-734)

Despite the predominance of the groups to question motivations and highlight the need for “buyer beware” – especially with the offer of free hearing tests – several participants were eager to use the availability of free tests as both a starting point and a facilitator to seeking help:

P1: ...you always see... people who sell hearing aids doing the... tests for free. And, I – I would go to those for free, because I wouldn’t, my personality is such that I wouldn’t... feel obliged about whatever they say I’m going to believe, but I might use it as a baseline because the tests are automatically computerized and so I, I don’t think it would be really easy to say you, you need... something... Anyway... I would do something like that just to start... but after the family doctor visit.
(FG1: 259-268)

P6: I wonder, the company who does this kind of thing {does free hearing screenings at seniors’ centres} was able to say we will give you a free test if you came to us and then they would go on with them, carry on with them...If they found I needed it, say well I have that free test, I’ll stick with them
(FG4: 610-613)

The dialogue that developed around the question of “where can you go?” demonstrates uncertainty about the roles of hearing health care providers and common misgivings about professional motivations. Even those participants who did not seem concerned with these topics (i.e., would start with a free hearing test) were happy to hear about places other individuals knew to be a “safe place to go” (P1, FG4: 202). This demonstrates the role that the sharing of personal experiences can play, which is an important part of the third theme.

3.3.3 Sharing stories and experiences: “Group yakkity-yaks”

The third theme that emerged was the importance of Sharing Stories and Experiences. The groups felt that giving opportunities for participants to share their own stories would be helpful for several reasons, which are expanded below.
“...we’d feel more involved”

One reason participants wanted to be able to share experiences and stories was to help make participants feel involved in the presentation. Participants noted that “everybody has a story to tell” (P9, FG1: 1322), and that the “asides” that presenters use – which are essentially his or her stories – help keep people “involved and listening, and... maybe thinking a little bit more about things too” (P7, FG1: 412-414). This sentiment of feeling more engaged and involved was echoed across groups:

P7: ... I just wanted to say that the case study doesn’t really engage me. Quite frankly (pause)... I don’t care much about Freda and Frank… but I do care about (P4)’s family. And I think that usually within any group you’ll be able to elicit real comments about real folks... Right? And… that really does engage me. Because I care about real people (FG2: 486-498)

P4: I think if it was a little more two-wayed, it’s like it was always the presentation with little opportunity for interaction we’d feel more, as a participant we’d feel more involved. (FG3: 549-552)

“…you get people talking and admitting”

A second reason suggested for sharing stories in the presentation was that talking about one’s own perspective of hearing health might help in recognizing and admitting a problem or to start to change. For example, one participant noted that by asking about participants’ hearing health history a feeling of “ownership” of the problem might result (P4, FG2: 630). The power in sharing was also demonstrated in the following quotation:

P6: I think what’s happened is... just in this small group, considering it’s a peer group we’ve shared some very personal information. You’re going to find that in every workshop P: Yup
Uh hm
P6: When you get (with) your peers you tend to, there’s, at some point there’s this (pause) trust that builds and then you start to share your own personal-those are your case studies... I think when you get people talking and admitting that yeah, I’m there, damn it, but I’m there... you know then the rest of it can... it makes them more free, I guess. To say hey, well, I’m not the only one. Right? (FG2: 557-575)
This excerpt also alludes to a third reason for promoting the sharing of stories and experiences: the discovery that many other individuals wonder about and experience hearing loss.

“…you have company”

By sharing stories and experiences it can become clear to those involved in the conversation that hearing health is a common concern among seniors. This opportunity to talk about hearing loss and discover you are “not the only one,” can have an impact on people:

P6: You know, there are other people that are feeling the same way I’m feeling. When you have company (heh heh) it makes you feel a little bit better.
(FG2: 916-918)

P1: But um, no it’s to make you aware that it’s a common thing and it’s nothing to be ashamed of and just hope it’s not really so progressed that... you feel hopeless”
(FG3: 854-857)

On a related note, the groups commented on the importance of learning the true prevalence of hearing loss in older adults, as taught in the presentation. While the groups generally knew that hearing loss is a common problem in older adults, just how common came as a surprise. Understanding the prevalence of hearing loss was an important factor in further supporting the discovery that hearing loss is a common concern among older adults:

P4: Yeah, that was interesting about it was that this is the third illness or concern, it was arthritis and heart condition or
M: ◦heart health◦
P4: heart and arthritis and then this. I-that surprised me.
...
P1: That surprised me too, because I didn’t think it counted that, it really counted that much, that high... that it is that high
(FG3: 901-908)

Sharing stories and experiences about hearing loss can help people relate to the topic and to see hearing health as a common concern, but these stories are also a significant resource. The
fourth reason for the sharing of stories was that participants wanted to share knowledge so it could be used by other seniors.

“…learn from each other”

As the following quotations suggest, it was recognized that participants had a wide variety of experiences that could help others learn:

P4: ‘Cause you can draw from, from the participants their own personal experience of maybe being, having to deal with someone, dealing with different degrees of deafness. (FG2: 379-381)

P2: There should be more time for people to talk about it than just that part... And what’s most, we can learn from each other. A lot. And that’s what you get through like group yakkity-yaks. Right? (FG3: 506-515)

Despite carefully wording the discussion guide questions to protect participants from having to share his or her own experiences, it was common for participants to tell personal stories. These demonstrated that the older adults in the focus groups had knowledge and experiences to share, and were eager to do so. The stories displayed a wide range of personal experiences – working with young children with hearing loss, trying to persuade others to seek help, discussing the merit of hearing assistance technology, and sharing personal hearing health history, to name a few – and, these stories were welcomed by the participants.

Throughout the discussions, it also became apparent that the sharing of stories and experiences could have an influence on hearing health change decisions, both positively and negatively. For example, a positive influence was noted in the interest that developed surrounding stories about the success of hearing assistance technology options (FG2: 565). Negative influences were noted, for example, about second-hand knowledge of the cost of hearing aids: “... Yeah, a lot of them, word of mouth, or somebody they know had problems
with hearing so they’d never do it. They’d never go then. If they ever admit that they have... hearing loss” (P1, FG3: 292-295).

The data suggest that sharing stories is both useful and powerful. Whether opportunities to share stories are used to increase engagement, to promote the recognition of hearing loss and its common occurrence, or as a means to teach others, sharing personal experiences can have diverse impacts. As one participant stated, “You can learn a lot just... listening to (pause) generally speaking, especially the bright, bushy tailed seniors who are full of wisdom!” (P2, FG3: 1392-1396). The use of stories and experiences should be considered alongside the barriers and facilitators to hearing health change, as are discussed next in the fourth theme.

3.3.4 Barriers and facilitators: “You can lead a horse to water…”

The fourth theme that developed was one of Barriers and Facilitators to hearing health change. The sub-title “you can lead a horse to water…” captures the essence of this theme (P7, FG1: 416-417): it suggests that even when sufficient information is provided, the process of change cannot be forced. There are many barriers and facilitators to hearing health change that were discussed by the groups. This section addresses what the groups thought would affect how or if individuals move forward to change their hearing health. This discussion followed several sub-themes, which are expanded below.

“... less than perfect”

There are many well-known stereotypes about hearing loss in older adults. One connotation of hearing loss is that a person wearing hearing aids is “old.” In fact, “not accepting their age” (P2, FG4: 539) was suggested as making it less likely for individuals to make changes. It was mentioned that the presentation combated this stereotype, as participants learned that there are several causes of hearing loss: “It’s not only your age but it can be some sickness
you ignore” (P2, FG4: 517). Participants suggested that change could be facilitated by providing evidence against the stereotype of hearing loss implying advancing age.

When asked what made change less likely to occur, one group quickly responded with fear, ego, and denial (FG3: 1234-1245). Fear was not specifically commented on further, but all three were perhaps intertwined in the discussions, in relation to how self-identity can be affected when hearing loss becomes a concern. For example, participants commented that “…they don’t want to (show) that they have hearing aids” (P2, FG4: 542) and that “… a lot of people won’t even try on hearing aids because they think it makes them look funny or you can notice it” (P1: FG3: 639-641). While this resistance could be attributed to aesthetics or ego, one group noted that denial might be a more accurate term for some: “It’s not just vanity either. Like in my brother’s case I’m quite sure it’s the fact that he simply isn’t ever going to admit he’s less than perfect” (P7, FG1: 563-564), and further, “He doesn’t believe he can’t hear “ (P6, FG1: 581).

This idea of hearing loss indicating that someone is “less than perfect” was addressed differently by another group. In this group, it was discussed in terms of the impact of hearing aids on the ego, specifically in men (note that this was introduced by a male participant, P4):

P4: And one of the things I concern myself about, and I think it might apply to… men, is the... question of… wearing a hearing aid and seeing it... as almost... some kind of loss of masculinity.
P2: Yes
P1: mm hm
P4: What’s the word, it emasculates them. Is that the word? I don’t know, I’m struggling here. But it has something to do with the ego
P2: I think it does
P4: You know I’m a man and (xxx)
P2: Like losing your driver’s licence, right, when you get older. You know how hard that is? (FG3: 956-968)

Gender was not discussed in other groups, but it was an important topic to FG3. The group saw gender as affecting how individuals experience hearing loss as well as their ability to cope and adapt to it (FG3: 329-333).
Regardless of gender, it was apparent that the groups thought that making change for hearing health is dependent on individual perceptions, only some of which can be addressed through the presentation. Other people might also play a role in addressing perceptions; the impact of others is discussed in the second sub-theme in this theme.

"It really annoys me, but it’s true”

Through the stories shared in the focus groups, it became apparent that the reactions and perceptions of others could affect the actions of individuals with hearing loss. As mentioned earlier, hearing loss might be more easily recognized in others, and some individuals require the input of others to see that a problem exists. What is not always apparent is how this input can or should be given. Participants noted having experienced frustrating instances where they were uncertain about how to share concerns about the hearing health of individuals suspected to have untreated hearing loss:

P2: … but how do you convince other people that they should get some help, because it’s annoying. When I used to talk to my Dad every day… he didn’t always have his hearing aid in, like over the phone it was like work. I had to repeat myself three times, raise my voice and… I was usually really tired at the end of that… But how do you get that to them? (FG3: 726-734)

While some participants mentioned struggling with how to approach someone they suspected might have hearing loss, others had specific ideas of what to do. One participant suggested “I would take them on a date. Like, you know… let’s go, here’s this free hearing test let’s just get started then we’ll go for lunch afterwards” (P1, FG1: 1094-1095). Another suggested if “…you know your family well enough, you know what’s going to work for them” (P6, FG1: 537-538). One participant shared how she had approached someone with hearing loss by sharing her perception of that person’s hearing problem:

P2: …One of the things, I guess I’m a mean person, but one of the things… I’ve used a couple of times on family members is well, you know, I’d say… you are an intelligent person, and we like to talk to you. You like to talk to us, we discuss politics and blah blah blah, whatever we
do discuss. And I said, do you realize that… if you are, aren’t able to hear a major fraction of what’s going on, you very commonly say something that is totally out of context and… not in any way related, really, to what is being discussed… And I think that if you realized, you’d realize that makes you look stupid. And if you don’t want to feel if you don’t want to be part of it and know what’s going on and contribute… go and see your doctor or whatever, get your test. And that… I guess that’s mean... If you don’t want to feel stupid go and get your ears tested

(FG1: 511-535)

While the groups noted that specific approaches could be taken to share one’s concern about someone else’s hearing health, there were also several limitations about doing so. One problem was captured in the phrase “But his wife says oh he hears what he wants to hear” (P2, FG3: 725). The discussion that surrounded this quotation suggests that this communication partner may not recognize a hearing problem, and subsequently may not help in the recognition and admitting process.

Another problem with approaching others is the defensive reaction that can result when the wrong approach is taken. This was demonstrated by an individual who was resisting making an appointment to have a hearing test, despite recognizing and admitting a problem: “I should. I know I should because my kids have been saying for years mother get a hearing aid you’re deaf. And it really annoys me, but it’s true” (P1, FG4: 606-608).

This sub-theme demonstrates that the influence of others can be both a facilitator and a barrier to change. The next sub-theme addresses a facilitator, feelings of control.

“You can do something”

It was noted that an individual is more likely to make a change if he or she feels in control, or thinks it is possible to do something. Dialogue on this included “…the realization that you can do something. You can check in to, check different things out” (P1, FG3: 1090-1091). One specific area in which participants felt others would be more likely to make change, because of one’s ability to control the situation, was preventing hearing loss:
P1: ... hearing health prevention and hearing health could have a little bit more emphasis... ‘Cause that’s something you can do yourself.
(FG1: 1000-1003)

P5: And that environmental factors is something that people can... control to (a certain extent) themselves. That’s important.
(FG3: 1491-1492)

Discussion in the groups suggested that feelings of control might influence what individuals do for hearing health. Another factor that affects decisions to make changes is expectations of the outcome, which is discussed in the next sub-theme.

“You’ve got to give people hope”

The fourth sub-theme in this theme was the importance of expecting a positive outcome following hearing health change. The groups thought that knowing some of the positive impacts of change might be encouraging to those who are unsure of whether to take a step forward. One participant suggested:

P7: What if we stress the, in our discussion the benefits of (pause) of how your life changes if you find out whether or not you need help and then if you do need help that you actually go ahead and try and get the help. Because it should, it should have a really positive effect on your, on your life, on your lifestyle and, uh, that social connectedness for one thing.
(FG1: 492-496)

While this excerpt suggests wide-spread positive effects from hearing health change, others were more reserved in the outcome expectations to be expressed:

P4: You’ve got to give people hope. You’ve got to give them a positive message.
P1: Yeah
P4: You know, this particularly when, let’s face it, I’m getting old and I realize that there’s, I’m more limited, I’m more vulnerable, and things like that. And I’m concerned, you know. So... this will be, your life is going to be better.
P2: Yeah
P4: ... I know it’s not a panacea [for everything] but maybe....
(FG3: 1057-1069)

As this participant noted, giving people hope is especially important with seniors. Hearing loss can be one of many concerns as one ages, making it important to emphasize that changes...
can indeed be made that could have a positive impact on the individual. This positive impact may be seen as a facilitating force that could counteract the concerns of perceived cost, which are discussed in the next sub-theme.

“Why start when I can’t pay”

A commonly mentioned barrier to hearing health change was that of cost. While some participants thought that most seniors are aware of the cost of hearing aids, groups also made note of the recurring nature of costs, and questioned why the cost remains high.

In one group there was an interesting discussion about the perception of the cost of hearing health, and the subsequent influence on what individuals will or will not do. One participant noted that “the minimum check-up with the doctor or audiologist” is “a really economical way of checking on your health” “that’s well within most people’s income” (P4, FG2: 922-932). Others, however, were quick to disagree:

P4: yes, most people won’t be out of pocket, or not much, initially.
P6: Initially heh heh
... P2: initially
P6: Yeah
P2: Initially
M: Right
P4: well it... but let’s face it
P1: I think they’ll be looking at the three thousand plus and looking at it and saying I can’t do it
P2: Absolutely
P1: (They just) won’t go. Why start when I can’t pay
P6: Well I say better the devil you know than the one you don’t
(FG2: 951-964)

Although the final statement in this excerpt echoed the initial sentiment of the feasibility and importance of a hearing check-up, it was apparent in this and other groups that the cost of hearing health care is a major concern for seniors. Hearing aid cost was frequently mentioned, but the groups thought of the cost as including more than just a set of hearing aids. The expense of annual hearing tests (FG1: 137), the recurring cost of batteries (FG4: 571), and the fact that
hearing aids have a limited lifespan (FG1: 177-182) were all concerns brought forward in the discussions. In recognition of the cost and the need to address it, sources of cost assistance were noted: service clubs (FG2: 967), family and friends (FG2: 974), insurance/health care plans (FG1: 331), and the government/Medicare (FG1: 1178; FG3: 1510).

When asked what would make individuals more likely to do something about hearing loss, one participant – who was wearing two hearing aids – responded “Telling us that... we don’t have to pay so much heh heh it is horribly expensive” (P6, FG4: 519-521). The fact that this was shared by a participant who was wearing hearing aids was interesting to note, as it was apparent that she at some point had come to terms with this barrier.

Although the groups thought that most seniors would be aware of the cost of hearing aids and that cost would be a barrier to moving forward, much of this discussion was based on second hand experiences and stories. In fact, there was a general consensus of “but I didn’t realize it was still that high” (P1, FG3: 314) from participants who did not have hearing aids. One participant took this further, questioning how the prices have remained high despite technological advances:

P1: Which reminds me, why on earth has there not been technological innovation to bring the price down, like with laptops
P: yeah
P1: And… i-Phones and everything. The prices have gone way down. Why where’s this world conspiracy about hearing aid prices. There has to be because there’s just no reason for them to be
P4: Same guys that control our gas prices (FG1: 1069-1075)

It is apparent that older adults want and need information on “what things cost with hearing loss” (FG2: 589-590), to address the perceived monetary cost of hearing health care. This suggests that although the perceived monetary cost of hearing health care – focusing on but not limited to hearing aids – is high, a greater understanding of the cost might have a positive
impact on taking steps for hearing health. The next sub-theme addresses the limitations that outside forces have on supporting hearing health change.

“A question of personal choice, personal responsibility”

The final sub-theme that emerged within Barriers and Facilitators referred to the personal nature of hearing health change. Hearing health change was noted to be both a personal choice and a personal responsibility. To continue the analogy of this theme, once a horse is led to the water, taking a drink is its own decision:

P2: You can’t really make... people uh do anything, you can just point out that it would be a really great idea if you did... because life might be better or you know, something like that...

P4: I think you try to encourage them, I don’t know if you can apply any pressure points... Because everything in life is all a question of personal choice, personal responsibility. (FG3: 1281-1293)

One participant took this even further, suggesting that an individual with hearing loss has a responsibility to do what he or she can to improve conversation for the sake of everyone he or she talks to:

P6: And I think it’s really important that if you know you have a hearing loss, I’d like to see a section about responsibility... about personal responsibility... Of what you can do to not only assist yourself (pause) but assist others around you to communicate better... and I can’t stress that enough because, um, we shouldn’t have to guess. We’re you know we’re... supposed to be... mature adult people... trying to deal... with aging...and that... could well be part of one of the things that goes... on us. But it’s how we deal with it. When we take it as a negative, when we say okay that’s happened what can I do to make this better, for everyone around me. And I’d like to see something about personal responsibility. (FG2: 145-163)

The participants recognized that there are limits to what a communication partner can do to support change. Although “it’s just a really personal decision that they have to make... to decide to take action” (P7, FG1: 1358), it was noted that it is important to arm people with the “necessary tools” (P2, FG3: 1274) to do so.
Each of the sub-themes in the theme Barriers and Facilitators addressed a topic that could affect the use of the “necessary tools” for hearing health change. Recognition of the individual nature of the decisions, as well as the impact of feeling hopeful and in control in facilitating a change was noted. The role of perceived cost and impact on self-identity were also discussed. Participants were also aware that it is difficult to know how to approach others with hearing loss concerns. In the fifth and final theme, the presentation is discussed as a means of sharing knowledge and addressing the variables that affect hearing health change.

3.3.5 The presentation: “It might push somebody like me to do something about it, right?”

The final theme addresses The Presentation as an information-sharing tool. The participants suggested that the presentation might act as an impetus to change hearing health. Throughout the preceding discussion, there has been reference to the role of the presentation in relation to each theme. The presentation provided an opportunity to teach older adults how to recognize a hearing problem and what to do about hearing loss, to share stories and experiences and to address some of the barriers and facilitators to change. It is understood that it is difficult to separate the role of the presentation from that of the focus group, and the impact of the two together. The discussion questions and subsequently the participants’ responses were centred on the topic of the presentation. As such, that is how the results are presented here. This is done with the knowledge that the focus groups themselves likely affected the perception and discussion of the presentation.²

It was noted that the presentation could serve as an opportunity for individuals to recognize a hearing problem and admit a need for change. One participant in FG4 thought that

² Many changes were suggested that the participants thought might make the presentation more effective. These are presented in Appendix B.
by attending the presentation some participants might realize the extent of a hearing problem and the need to do something: “If they can’t hear very much then maybe they couldn’t hear you very much then they’d think oh gosh I should do something about that! Heh heh” (P6, FG4: 583-585).

Several participants noted that the presentation provides information on “what to do about hearing loss.” This was stated more generally as learning “the route to go” (P6, FG1: 879-886). As well, more knowledge about where to go was reiterated, such as learning “about the BC College of whatever to verify that that was a safe place to go... I thought that’s important, you know” (P1, FG4: 200-202). Other specific steps that individuals might decide to take because of attending the presentation included:

P2: ... And for me personally, I’ve no(h)w decided I need to go back for my second appointment which I never did. So, yeah it’s alright (FG3: 244-249)

P2: I learned that I can now help some friends to ask their doctors... to look after their ear and uh refer them to an audiologist (FG4: 450-455)

Many stories and experiences were shared in each event. This lends support to the request that participants’ stories replace the case study. Engaging the individuals present was suggested to be an integral part of making the presentation effective, and the groups thought this could be supported by including more time for participation. It was also suggested that interest could be promoted by shortening the presentation and also including demonstrations. But, even when delivered without these changes, the presentation and focus groups acted as a platform for seniors to begin to share stories and experiences about hearing health. As one participant said, “Well it certainly opened the conversation didn’t it?” (P6, FG2: 864)

As was discussed in the theme Barriers and Facilitators, the participants stated that there are several barriers and facilitators to change. One catalyst noted from the presentation was
learning that there are several causes of hearing loss, and not just aging. Several other facilitating topics were suggested in the sub-themes (i.e., emphasizing personal responsibility, giving people hope for a positive outcome), and the groups thought that including each would improve the presentation’s likelihood of supporting changes to hearing health.

Another topic that was noted by the participants in relation to the presentation’s ability to support change was “personal choice, personal responsibility.” The groups stated that no matter why people attend, or whether any given individual actually decides to make changes, there is importance in the presentation content and experience. What people learn from the presentation might increase the likelihood of something having an impact either now or later – and there is value in both:

P7: One of the things that comes up in the evaluations is, uh, that people appreciate having, just learning new information even if it doesn’t really apply to them, or even if they don’t plan to do very much about it. But they enjoy learning new information.
P: uh hm
   That’s right
   Yeah
P7: about new topics. So, even, even if it doesn’t have an application today... maybe it will later. (FG1: 895-903)

P1: ... I figure the more education for people the better... like it doesn’t matter what age, but the more informed people are, maybe something will hit home. (FG4: 890-894)

The presentation was seen as a way of supporting change. There were several instances where it was mentioned that those who had attended would recommend it to others, or would bring others to a presentation, especially if a hearing loss was suspected:

P6: I would say that, that if someone has, knows somebody who should get hearing checked it would be great for them to bring them to a presentation.

...  
P: Yes
P6: And... you wouldn’t be the one who was forcing somebody to go.... (FG1: 867-872)
The groups used phrases like “it might push somebody like me to do something about it” (P1, FG4: 409-410), “you keep talking about it to yourself but when you actually come to something like this it gets you - I should go” (P6, FG4: 493-496) and “this is a sure way of prompting” (P6, FG1: 1349). These strongly suggest that the presentation could play a role in helping participants move forward, to make hearing health changes.

Yet, the presentation was also seen as being valuable for more than just seniors with hearing loss. It was suggested that “All seniors need to hear it” (P2, FG1: 1194), and that “family members at home” (P2, FG4: 713) and people with “normal hearing” (P4, FG4: 727) should attend. Another participant stated that “You know, it’s of interest to all age levels” (P7, FG1: 1167-1168). One of the reasons given for this desire to have others attend the presentations was:

P4: It would give them a chance to understand what older people might be facing... And how to, how to help.
M: Is that something you would have liked to have seen more in the presentation is that (pause) people with hearing loss working with people without hearing loss?
P4: Well, just so long as the younger people are recognizing it, and can be helpful... in their suggestions as to (pause) clean out their ears and get to the doctor (FG4: 779-790)

Participants were eager to share what they had learned with individuals seen as being in need of the information. This desire to share the information with family members and friends was supportive of the notion that the presentation has the potential to promote hearing health and lead to future changes to the hearing health of older adults.

3.3.6 Summary of the themes and interpretations.

When asked about hearing health change, older adults in focus groups had diverse and deep discussions. From inductive, thematic analysis of the discussion data, five main themes and many sub-themes and topics were identified. As presented here, each theme stands alone but is
also intertwined with the others. Together, the themes fall within the greater context of changing hearing health behaviour, in terms of initiating and supporting change. This and other topics are presented in the following chapter, containing the Discussion and Conclusions. The final chapter will place this study within the wider literature.
Chapter 4: Discussion and Conclusion

4.1 Introduction

In the current study, participants recognized that there is an underlying resistance to changing hearing health. In this study, a change is meant to encompass any step taken towards healthier communication. Resistance to changing other health behaviours is a well-known phenomenon, with a wide body of literature that attempts to explain reasons for this resistance, as well as ways in which it can be overcome. The focus group participants’ dialogue explored this resistance. The dialogue has been interpreted to suggest how resistance can be overcome in terms of initiating change (i.e., how to begin to change) and supporting change (i.e., how to influence the continuation of change). It is also interpreted that after change is initiated, and before it can be supported, there is a personal decision to actually make a change.

While some of the findings of the current study confirm previous findings, others are novel to hearing health literature. Each theme’s relationship to other literature is briefly discussed below, as well as how each theme demonstrates initiating and/or supporting change. Then, this study is considered in light of health psychology’s health behaviour theories. And finally, the implications of this study, for both health literacy educators and the field of audiology, are explored.

4.2 Placing the Themes within a Wider Context

Thematic analysis of four focus group discussions with older adults led to five themes emerging from the data. Each theme connects to previous hearing health literature, and suggests how to initiate or support change. Each of the themes is investigated below.
4.2.1 Recognizing and admitting.

The first theme that emerged from the data was that of Recognizing and Admitting hearing loss. Participants suggested that the first two steps an individual must take to change his or her hearing health are to recognize a problem and admit that it has an impact on his or her life. It was the participants’ emphasis on the necessity of both of these steps that led to my interpretation that together recognition and admission of hearing loss are necessary to initiate hearing health change. Participants noted that some individuals may require more information or input from others to be able to recognize the presence of hearing loss. Once a hearing loss is recognized, the transition to more outward disclosure of the impact of the problem leads to it being admitted. Separately, the individual steps of recognizing and admitting are in agreement with other literature. But, the linking of recognition and admission as two distinct but progressive steps for hearing health change has not been reported, to our knowledge.

In their 2011 study, Manchaiah et al. suggested that the two stages of pre-awareness and awareness precede action. While these stages have similarities to the recognition of hearing loss, admitting hearing loss is not noted as a stage in Manchaiah et al.’s work. Similarly, Jennings (2005) noted identification and acknowledgement as processes through which individuals with hearing loss progress. Again, these stages account for the recognition of a problem but not a transition to explicit outward admission. Jennings (2005) also related identification and acknowledgement to the Stages of Change (SOC) theory described in Chapter One, as corresponding to a transition from the stage of pre-contemplation to contemplation. Like the previous examples, these stages account for a change in recognition and intention to change, but do not include an outward admission of the problem.
Admitting hearing loss may be similar to the concepts of denial and acceptance. Both denial and acceptance were noted as factors that affect self-perceived hearing ability, which is explored in Chapter One (Garstecki & Erler, 1998; Rawool & Kiehl, 2008). Self-perceived hearing ability is stated to be the most important determinant of whether or not action is taken to improve hearing health (Hickson & Scarinci, 2007; Palmer et al., 2009). By definition, recognizing and admitting hearing loss imply a change in how an individual perceives his or her own hearing ability. It is apparent, then, that both recognizing and admitting hearing loss are required to initiate individual hearing health change, as they directly affect, or are directly affected by, self-perceived hearing ability.

The finding in the present study that hearing loss is a “hidden disability” for society as well as individuals supports the need for a population-level understanding of hearing health and its impact on overall health. Lack of recognition of hearing loss by society has been noted in previous studies. For example, Davis et al. (2012) state that the “silent and insidious nature” of hearing loss may lead to the general public not seeing “hearing impairment as a dramatic health problem requiring urgent intervention” (p. 1). Jennings (2005) reiterates that health care services are often lacking with regard to hearing health. Fostering an understanding for the recognition and admission of hearing loss as an important health topic is required in society, the government, and with other medical professionals, if it is to be seen as an important topic to discuss on a personal and societal level (Davis et al., 2012; Gilliver & Hickson, 2011; Hougaard, Ruf, & Egger, 2013).

4.2.2 Understanding the options.

The second theme that emerged from the data was Understanding the Options. It became apparent that older adult participants needed more information about “what to do” about hearing
loss. To make appropriate decisions about initiating change, individuals wanted to learn what options were available. It is also possible that learning more about the options might support change, if it has already been initiated.

According to participants, talking to a family doctor is a key step in “what to do about it.” The family doctor’s role was understood to include checking for wax and referring to or suggesting other professionals. The expectations around the role of family doctors in the hearing health change process were interesting to note. In Canada, it is not necessary to have a doctor’s referral to see most hearing health professionals, with the exception of ENTs. The expectation that family doctors will help with hearing health decisions indicated that those in family medicine need to have at least basic knowledge of how to help. Family doctors are viewed as credible sources of information, and are often used as a first point of contact about health concerns (Gilliver & Hickson, 2011; Schneider et al., 2010). This puts doctors in the position to act as motivators of change (Gilliver & Hickson, 2011). The ability and probability of doctors helping in hearing health change has also garnered recent attention in the literature.

Several recent studies have investigated medical practitioners and their attitudes, beliefs, knowledge, and practices of hearing health. In an Australian study, the majority of doctors were aware of the prevalence of ARHL as well as its impact and severity for those affected (Gilliver & Hickson, 2011). Yet, the majority of doctors were unlikely to spontaneously discuss hearing health with their patients, and patients reported that their concerns were occasionally dismissed (Schneider et al., 2010; Wallhagen & Pettengill, 2008). Further, in another study from Australia, Schneider et al. (2010) found that of the 35% of individuals who sought help specifically from a general practitioner, only 6.4% reported receiving help or referral.
Several reasons have been put forward to explain this apparent lack of attention to hearing health by family doctors. While Gilliver and Hickson (2011) suggested that some doctors may not view all hearing loss “as serious enough to warrant intervention” (p. 854), others point to time constraints, inadequate remuneration, and a need for education and outreach (Johnson, Danhauer, Bennett, & Harrison, 2009; Schneider et al., 2010). Specifically, there is a need for doctors to be made aware of the possible consequences of untreated hearing loss on quality of life; efficient and appropriate screening methods; when and where to refer patients; and, the benefits and options of hearing rehabilitation (Gilliver & Hickson, 2011; Johnson et al., 2009). If family doctors are to play a role in initiating and supporting hearing health change, their role must be assisted through receipt of accurate information and sufficient resources to help them help their patients to make appropriate and informed decisions.

After seeing the family doctor, subsequent steps suggested by the participants were more varied. This is perhaps because of the perceived uncertainty of hearing health professional roles. Nonetheless, returning for a follow-up appointment, booking a hearing test, and seeking information from other sources were each noted as possible steps. Acquiring knowledge about “what to do about it” can be seen as a necessary component for both initiating and supporting change, as demonstrated by these stated steps.

A specific part of Understanding the Options was a need to address the perceptions of professional roles and motivation, which has been noted in previous studies as well as the wider media. For example, qualitative studies by Kotjan (2012) and Winsor (2011) uncovered themes that indicated that individuals may need to clarify professional motivations before seeking help and making changes. The direct implications for trust and the client-clinician relationship are considerable (Winsor, 2011). In the same vein, a Canadian survey of hearing aid users and
audiologists highlighted the necessity of defining ethical practices in audiology, and to
determine how to set and adhere to policies that maintain these practices (Coolen, Caissie, &
Aiken, 2012).

The present study found that participants were uncertain about professional roles and
motivations; there is a need for transparency and accountability in clarifying services, costs, best
practices, and associations with manufacturers. These steps are required if clients are to trust
hearing health professionals, which is necessary to initiate and support hearing health change.

4.2.3 Sharing stories and experiences.

The third theme that surfaced from the data was Sharing Stories and Experiences.
Consistent with previous literature, the sharing of stories and experiences was noted as a means
to engage participants, to help recognize or admit hearing difficulty, to show that hearing health
is a common concern, and to use experiences as a source of knowledge. Participants’ dialogue
suggested that stories and experiences could influence future hearing health decisions.

The role of stories for demonstrating and teaching in general has been shown elsewhere in
the literature, as reviewed in Chapter One (Clark & Rossiter, 2008). Additionally, Levy (1976)
suggests that environments where stories of self-disclosure are fostered provide many additional
benefits. They offer models of good behaviour, suggest novel options of change, and create a
normalizing environment where the individual may discover that his or her concern is also
relevant to others. Additionally, the individual sharing the story or experience in a group (i.e., a
group learning about and discussing hearing health) may be better able to identify (i.e.,
recognize) as having a problem, and can then benefit through the social reinforcement of this
and other positive behaviours (Levy, 1976). This research supports the present study’s
suggestion that opportunities to share stories and experiences in group settings will encourage
individuals to recognize and admit hearing concerns, and will help individuals discover that hearing health is a common concern among seniors.

Relying on impromptu discussion in groups concerned with hearing health may create some difficulty. Firstly, impromptu discussion may not spontaneously address all important topics. This implies that other means should be considered to impart this information. Secondly, relying on impromptu discussion creates greater demands on the presenters to prepare their own stories in advance. Also, presenters must be able to effectively elicit relevant group input, and ensure all insights are heard by all participants, some of whom may have hearing loss.

Despite these concerns, sharing stories and experiences is likely to be an overall positive addition to information-sharing settings. Beyond the previously suggested benefits, opportunities to share stories and experiences might provide validation of the wisdom of seniors. Participants recounted having experienced instances where they had been victims of ageism, where the wisdom and knowledge of the older generation was discounted. By providing an opportunity for older adults to talk and share specifically about hearing health in a group setting, many benefits (e.g., learning that hearing health is a common concern) might occur.

4.2.4 Barriers and facilitators.

The fourth theme that emerged was that of Barriers and Facilitators to hearing health change. The groups explored several factors that were thought to affect change: individual perceptions, reactions and perceptions of others, feelings of control, expectation of a positive outcome, and cost. It is interpreted that an individual’s view of these factors affects the initiation of change, as well as how change is supported. Additionally, one subtheme addresses the personal nature of change, which accounts for the actual personal decision to make change. Many of these factors have been explored in the existing literature.
Participants suggested that individual perceptions of one’s self in relation to one’s hearing could influence whether an individual will make hearing health changes. Age-sensitivity, fear, denial, and ego are barriers that are interpreted to be internal and psychosocial in nature. Previous literature suggests that overcoming negative perceptions, especially those that are internal, is necessary for the uptake of assistive devices (Gramstad et al., 2012). In previous research, it is stated that the perceived stigma of hearing loss and hearing aids may be of some concern to older adults and may affect their decisions to make changes (Cox et al., 2005; Garstecki & Erler, 1998; Knudsen et al., 2010). Participants in this study suggested that resistance to change due to internal perceptions could be countered with targeted information, such as addressing perceptions about age by highlighting other causes of hearing loss.

Consistent with previous literature on the role of communication partners, the participants made note of several ways in which communication partners could help initiate and support hearing health change. Communication partners have been found to have important roles for motivating the initiation of change (Duijvestijn et al., 2003; Knudsen et al., 2010), and supporting change by taking part in rehabilitation programs (Collins et al., 2007; Hickson et al., 2006). Additionally, Winsor (2011) recognized both the positive and negative impact of others depending on whether the involvement was seen by the person with a hearing loss as nagging or encouragement. In the present study, one participant specifically noted her negative reaction to what could be considered “nagging.” She relayed how this contributed to her procrastinating making change. Participants also stated the importance of communication partners recognizing hearing loss and providing appropriate suggestions for follow up. Further research is needed about how to best help communication partners initiate and support change in these ways.
Two additional facilitators to change discussed by participants were feelings of control and the expectation of a positive outcome. Control (i.e., locus of control) has also previously been shown to be a facilitator of hearing health change, in terms of seeking amplification (Cox et al., 2005; Jenstad & Moon, 2011). Expectations have been found to play a role in hearing health change, especially intention to change (e.g., Meister, Walger, Brehmer, von Wedel, & von Wedel, 2008). Cox & Alexander (2000) designed a questionnaire (ECHO, Expected Consequences of Hearing Aid Ownership) to assess the expectations of new hearing aid wearers. The authors found that expectations about improvement to performance and functioning were often higher than will be met, but were good predictors of being satisfied with hearing aids.

Each focus group discussed the cost associated with hearing health changes. While several participants thought that hearing health changes could be economical initially, the majority thought that perceived cost would be a barrier to many individuals. These dynamic perceptions of the cost of hearing health change confirm the mixed impact of cost on hearing health change, as suggested by Knudsen et al. (2010) and Jenstad and Moon’s (2011) reviews. Further discussion of this topic can be found in Chapter One.

The final barrier and facilitator that was raised by the participants was the personal nature of change. In essence, this barrier was the groups’ way of explaining why even when facilitators to change are in place and barriers have been addressed, people choose not to change. It is this variable that determines if a decision to change is made, and is the missing component between initiating and supporting change. For example, while recognizing and admitting hearing loss are required to initiate a change, and knowing the options and addressing barriers can provide further support for a change, it is a personal decision that determines whether the change
actually happens. The element of personal choice involved in changes should not be discounted; literature on motivating change emphasizes that when decisions are made based on personal goals, the individual is more satisfied and successful (e.g., Knudsen et al., 2010).

Although it did not develop into a subtheme, there was considerable interest in hearing health management options other than hearing aids; hearing assistance technology and communication strategies were both discussed by the groups. As noted in Chapter One, previous research has found these alternatives to be appropriate for some individuals either as a precursor to seeking hearing aids, or as a suitable alternative (e.g., Laplante-Lévesque, Hickson, et al., 2012; Winsor, 2011). The participants’ discussion and request for further information strongly agrees with a general need for information about options other than hearing aids.

4.2.5 The presentation.

The fifth and final theme that surfaced from the focus group data was that of The Presentation as an impetus to change hearing health. The COSCO presentation combined elements of peer teaching, peer learning, and narrative (case-study) learning. No previous studies are known that combine these elements with participatory action learning (PAL; discussed in Appendix B) for hearing health information-sharing. The focus group participants suggested that the presentation is effective: it could provide “the necessary tools” to prepare individuals to make hearing health changes. It specifically provided information that addressed each of the previous four themes. Prior research has stated that many older adults seek information about hearing health before making management decisions (Winsor, 2011; Kochkin, 2007). While the presentation was considered by participants to be a useful tool to educate older adults, one main concern that must be addressed is the use of a non-expert presenter (Y.-H. Wu, personal communication, August 12, 2012).
While participants liked that the presenter was a casual contemporary, this also creates some difficulty for design and content purposes. The presenter is essentially a lay proxy, delivering content on a topic he or she may know little about. The presenters therefore rely on the presentation being accurate, clear, and succinct, and the designer relies on the presenter to use the information and tools provided. The importance of spelling, speaker’s notes, and only the most necessary content appearing on the slides (as it was noted that all content on the slides was read by most presenters) was emphasized by the participants.

Despite this concern, the positive possibilities of using a presentation like *Hearing Health for Older Adults* as an information-sharing tool to provide accurate and relevant information to those who need it far outweigh the potential problems. The benefits of peer teaching and peer learning were noted in Chapter One, and the focus group participants reiterated several of these reasons (see Appendix B). As previously mentioned, the presenters were trained by COSCO and the participants’ suggestions simply aim to maintain COSCO’s high standards. Thus, the presentation should be designed to be appropriate for an older adult, non-expert to deliver, to best meet the groups’ suggested needs.

The *Hearing Health in Older Adults* presentation represents an opportunity to aid attendees in the process of knowledge gathering, and to help individuals to make decisions and maintain control over these decisions (Beckingham & Watt, 1995). For example, the presentation, especially with the suggested increase in the sharing of stories and experiences, might be viewed as a platform for group discussion that can both initiate and support change to hearing health. This assumption is strengthened by considering previous studies of group discussion as noted in Sharing Stories and Experiences, above, as well as chronic disease management. In the latter, it has been shown that group programs can lower costs, and improve
patient satisfaction, self-efficacy, health status, compliance, and quality of life as compared to individual visits with health care providers (e.g., Beck et al., 1997; Collins et al., 2007; Sadur et al., 1999; Scott et al., 2004). Additionally, as was noted in Chapter One, improving health literacy can support people to make their own decisions and manage their own health problems (Beckingham & Watt, 1995; Mazzuca, 1982).

4.2.6 Summary of the themes.

Unique to the present study was the distinct progression from recognizing to admitting hearing loss. Also unique was the use of the categories of initiating and supporting change within each theme. Additionally, this study provided evidence for the application of health behaviour theories to hearing health change, which is discussed in the next section.

4.3 Evidence for Health Behaviour Theories

Several health behaviour theories were introduced in Chapter One and summarized in Appendix A. Throughout this study, it was apparent that constructs of the various health behaviour theories were relevant to how older adult participants viewed hearing health change. For example, participants’ discussion about “giving people hope” was interpreted as being parallel to perceived benefits of the Health Belief Model (HBM) and outcome expectations of the Social Cognitive Theory (SCT). While there were similarities to at least one construct of each theory, the HBM and SCT were the theories with the highest number of constructs that were interpreted to be parallel, or similar to, the groups’ dialogue.

The HBM has received recent interest in the field of audiology (e.g., Saunders, personal communication, 2012; Saunders & Griest, 2009; Sobel & Meikle, 2008), and this study suggests that further investigation of its applicability is warranted. The groups’ discussions directly related to several constructs of the HBM, including: perceived benefits (of the intervention),
perceived barriers, perceived self-efficacy, and cue to action. Only the constructs perceived susceptibility and perceived severity were not addressed by the focus groups.

The SCT has received less attention in the field of audiology (e.g., Sobel & Meikle, 2008), yet the current study suggests further investigation might be needed. Discussion by the focus groups brought to mind several constructs of the SCT, including: self-efficacy, outcome expectations, perceived impediments and facilitators, reciprocal determinism, and observational learning. Only the concrete goals construct was not directly mentioned in the discussions.

Another health behaviour theory that has been mentioned in audiology is the Theory of Reasoned Action/Theory of Planned Behaviour (TRA/TPB). Only the construct perceived behavioural control was closely related to the groups’ discussions; small sub-sections of the other constructs were mentioned briefly or not at all.

The Stages of Change model (SOC) has also received much attention in audiology (e.g., Babeu et al., 2004; Laplante-Lévesque, Hickson, et al., 2012). This model assumes that change is a continuous process, a view that has been of interest to those studying hearing health and hearing health change. Recently, this assumption has come under question; Laplante-Lévesque, Knudsen, et al. (2012) found that participants in their study were more likely to describe interactions with hearing health care professionals as isolated events rather than as chronological, connected steps that were part of a process or journey. The findings of the present study also question whether older adults think of hearing health change as a process or journey. Even with specifically targeted questions, participants had only a small number of specific ideas or next steps to suggest: there did not seem to be a continuum of ideas or steps that make up an ongoing process or journey. This finding is perhaps related to the ambiguity in hearing health care professional roles, as discussed in Understanding the Options. It may be that
older adults do not have enough clarity about hearing health options to think of hearing health change as a process or a journey.

Another construct of the SOC states that the process of change is characterized by stages that differ in how far in the future change is intended to occur (Prochaska & DiClemente, 1983). In the present study, the timing of change was given little importance, even when participants were asked directly. Given that the groups’ discussions provided little evidence to support change as a process, or in relation to the time until intended change, it is questionable what relevance the SOC has to understanding hearing health change.

4.4 Strengths and Limitations

One of the strengths of this study was that discussion was not limited to individuals with hearing health experience or concerns. The dialogue that ensued in the groups demonstrated that views of hearing health are important to many older adults, even those who have no more than general interest in learning about the topic.

The results of this study must be considered in light of several limitations. One limitation is that the impact of the presentation is difficult to determine, for several reasons. First, the focus group discussions could not access what knowledge about hearing health participants had prior to the presentation. Second, the impact of the presentation cannot be separated from that of the focus groups or from their combined impact. Therefore, it is difficult to determine how time spent in a focus group discussion affects seeing comparable results. And third, the impact of the events is further constrained by the relationship between willingness to change and actual behavioural change. The present results suggest that participants were willing – or think future attendees of the presentation would be willing – to make behavioural change. While willingness to change is considered a necessary precursor to actual behavioural change (Prochaska &
DiClemente, 1983), willingness does not guarantee that actual behavioural change will occur (e.g., see Meister et al., 2008 for an example in the hearing health literature). Further study of long-term hearing health change is required to determine the true impact of the presentation.

An inherent bias in this study was the use of the presentation as an educational tool and the researcher and supervisor’s known association with it. The latter is a caveat that was addressed in Chapter Two, and was considered in all stages of project design and execution. The former is a necessary confound; the presentation had to be educational in order to meet COSCO’s mandate, to be useful on its own, and to be a recruitment tool for the focus groups.

Additionally, the results presented here represent the thoughts and experiences of those people who participated in these four focus groups, and thus are not necessarily transferable to other focus groups or groups of older adults. It is expected, though, that some of the themes that emerged may be seen in similar ways in other groups. The representativeness of the study population is expanded below.

The study participants were a convenience sample of the older adult population of Vancouver. The participant population was somewhat representative of the greater older adult population from which it was drawn, with a few notable differences.

In this study, 85% of participants were female (23/27) and 15% (4/27) male; BC’s Ministry of Health Services (2004) estimated the province’s senior population to be 56% female and 44% male, indicating that a higher proportion of female participants was included in the study than exists in the older adult population. The underrepresentation of male input as a consequence of this limited attendance is a concern that might be considered in future studies of this type. The Ministry of Health Services (2004) estimates that 36% of the BC senior population are immigrants; 20% (5/25) of study participants reported being a new immigrant.
Study participants had similar levels of residence ownership to that of the general population; 56% (14/25) of study participants reported owning their place of residence, while 65% of the general population owned their own residence in the 2006 census (Turcotte & Schellenberg, 2007). Of study participants, 60% (15/25) reported living alone. This was substantially higher than estimates of 29% of Vancouver seniors living alone (United Way of the Lower Mainland, 2008). Study participants had a high level of education as compared to the general population of older adults in Vancouver: 72% of participants (18/25) reported having education beyond high school; 56% (14/25) of participants reported having a university education. Canadian census data from 2006 showed that 41% of Vancouver seniors attained education beyond high school, and 19% of the population attended university (Turcotte & Schellenberg, 2007).

As a result of convenience sampling, which was necessary given time and resource constraints, the average participant demographic characteristics differed from the general population in several ways; a higher proportion of females participated, and participants had more education and were more likely to live alone than in the wider older adult population. These gender, education, and living arrangement differences limit the study’s overall representation of the population, but could be an accurate reflection of the population of older adults who participate in COSCO or community centre events.

4.5 Implications

The implications of this study can be divided into those that pertain to people attempting to improve health literacy, to the profession of audiology in general, and specifically to the clinician/audiologist.
4.5.1 For presenters of health literacy information:

a) Based on the favourable feedback of participants, this study provided evidence for the use of COSCO’s model of presentations for the improvement of health literacy, specifically about hearing health in older adults. Using evidence-based principles similar to those employed by COSCO, especially the use of peer presenters, should be considered in the design of information-sharing presentations.

b) The inclusion of more real life examples, specifically through the sharing of stories and experiences by the individuals in attendance, should be done when possible. This may be especially true for hearing health, where many people have stories to contribute.

c) The focus groups provided an opportunity for rich data to be collected. Focus groups might be considered as a means of evaluation for the future improvement and validation of presentations.

d) Focus groups also served to continue the conversation about hearing health after the presentation was completed. Focus groups might be included after a presentation as a tool for fostering change through in-depth and meaningful discussion of a topic.

4.5.2 For the profession of audiology:

a) Given the finding that people need more information to recognize hearing loss and that it is a “hidden disability,” novel ways to bring wide-spread attention to hearing health must be considered. This should include endeavours ranging from word-of-mouth to those that are targeted and formal.

b) The roles of health professionals for initiating and supporting hearing health change must be clarified. The profession should acknowledge that the family doctor is likely the first place that older adults seek help for hearing loss. Then, it is essential that the
profession of audiology work with other health professionals to raise the profile of their respective roles in hearing health change. This might support earlier recognition and change in older adults.

c) Based on the barriers to hearing health change that were noted by participants, such as cost and professional motivation, there is a need for these topics to be addressed in an impartial and transparent way, possibly from a national level.

d) Given the parallels that were drawn from this study to the constructs of health behaviour theories from health psychology, further research is needed to determine how these theories may be applied to hearing health. This is especially true for the HBM and SCT.

4.5.3 For clinicians of audiology:

a) Consider how best to provide relevant information to clients and how to represent the profession to the general public. Specific topics to be addressed relate to the major themes and sub-themes, as well as those suggestions included in Chapter Three, and Appendix B.

b) Given the importance of sharing stories and experiences noted by the focus groups, mentorship opportunities and group sessions for individuals with questions or concerns about hearing health should be considered.

c) Educational presentations might be useful tools to educate groups with varied hearing health experiences to promote hearing health change; peer presenters could be used and discussion of attendees’ stories and experiences should be promoted to maximize the impact of the experience. It is especially important to include communication partners, to encourage recognition of hearing loss and to clarify what options exist.
d) Based on the groups’ discussions, older adults may not see hearing health change as an ongoing process or journey. It is important, then, to determine the goals and beliefs of each individual and tailor services as needed. For some individuals this might imply focusing on a small number of discrete and specific steps, as opposed to long-term goals.

4.6 Further Studies

The present study highlighted several areas in which further study might be warranted. Firstly, it is of interest to assess how the perspectives of older adults might differ in other demographic groups and geographical areas, such as older adults with lower education or from a rural setting. Secondly, to better understand hearing health change, the applicability of health behaviour theories, especially SCT and HBM, to the field of hearing health should be examined. And finally, long-term evaluation of behavioural change is needed to determine the true impact of the presentation.

4.7 Epilogue

Through this study I have gained a deep respect for the richness of qualitative inquiry. As a person more comfortable with science and hard facts, it has been refreshing, challenging, and at times frustrating, to delve into qualitative research through focus groups and thematic analysis. As an observer of each group discussion, I was consistently amazed at the insight and wisdom shared by the participants. Topics were put forward by the groups that I hadn’t thought of, or hadn’t thought older adults would think of. This in itself demonstrates the power of qualitative inquiry for understanding the “big picture.” Throughout data collection and analysis I constantly had to remind myself to broaden my mindset, and to stay true to the words of the participants. As a result, I have certainly become more self-aware, open-minded, and a better listener. The themes and topics raised also indicate where more work and research is needed
(i.e., clarifying professional roles; application of the health behavior theories to audiology), and emphasized how health professionals can help initiate and support hearing health change. I look forward to applying this rich insight the participants gifted me with as I begin my clinical career.
References


CCL. (2007). *Health Literacy in Canada: Initial results from the International Adult Literacy Skills Survey* (pp. 1–32). Ottawa, ON.

CCL. (2008). *Health literacy in Canada: A healthy understanding* (pp. 1–36). Ottawa, ON.


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## Appendices

### Appendix A  Overview and Comparison of Health Behavior Theories used in Audiology

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Purpose:</td>
<td>Emphasizes rational decision making based on certain beliefs as the explanation of individual differences in uptake of health-services</td>
<td>Uses behavioural intentions to predict future health behaviour</td>
<td>Emphasizes the role of self-efficacy in conjunction with other predictors as the causal structure of motivation, action and well-being</td>
<td>Describes the actual process of changing a health-related behaviour through discrete stages of behavioural intention</td>
</tr>
<tr>
<td>Construct:</td>
<td>Beliefs: Perceived susceptibility * Perceived severity Perceived benefits Perceived barriers * Perceived self-efficacy/control Cue to action</td>
<td>Predictors: Personal attitudes Social norms Perceived behavioural control/self-efficacy Behavioural intentions*</td>
<td>Predictors: Self-efficacy * Outcome expectations Concrete and cognized goals Perceived impediments and facilitators Reciprocal determinism between behaviour and environment Observational learning*</td>
<td>Change process: Based on the time-frame of behavioural intentions/willingness to change* Change involves both regression and progression</td>
</tr>
</tbody>
</table>

Note: * denotes the construct(s) suggested to be the greatest predictor(s) of health behaviour within that theory
<table>
<thead>
<tr>
<th>Component, cont.</th>
<th>HBM, cont.</th>
<th>TRA/TPB, cont.</th>
<th>SCT, cont.</th>
<th>SOC, cont.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use in audiology</strong></td>
<td>Understanding general hearing health help-seeking (Noh et al., 1994); hearing aid use and acquisition (Saunders, personal communication, 2012); hearing conservation (Saunders &amp; Griest, 2009; Sobel &amp; Meikle, 2008)</td>
<td>General understanding and predicting hearing health behaviour (Noh et al., 1994); hearing conservation programs (Quick et al., 2008; Sobel &amp; Meikle, 2008)</td>
<td>Hearing conservation (Sobel &amp; Meikle, 2006).</td>
<td>Amplification (Babeu et al., 2004); program uptake (Laplante-Levesque, Hickson, et al., 2012; Laplante-Lévesque et al., 2011; Milstein &amp; Weinstein, 2002); tinnitus (Kaldo et al., 2006); hearing conservation programs (Raymond &amp; Lusk, 2006)</td>
</tr>
<tr>
<td><strong>The role of information</strong></td>
<td>Information may address each of the constructs, but most importantly might provide the cue to action (Ogden, 2007)</td>
<td>Exposure to new information about an event, object, behaviour, or issue is required to attempt change (Fishbein &amp; Ajzen, 1975)</td>
<td>Knowledge is the “precondition for change” (Bandura, 1998, p 624); role-models/peers can optimize information-sharing</td>
<td>Varies depending on at what stage the individual is (i.e., use general advice when in pre-contemplation; Norcross &amp; Prochaska, 2002)</td>
</tr>
</tbody>
</table>
Appendix B  Design and Evaluation of a COSCO Presentation

COSCO’s health literacy workshops are approximately 90-minutes in length and follow a carefully considered layout. The presentation Hearing Health in Older Adults used in this study included 54 slides, designed using Microsoft Office PowerPoint.

This presentation was designed to be an introduction to hearing health for older adults. It was initially based on content from a module created by Care for Elders at the University of British Columbia, which was designed to educate health care professionals working with older adults. Content and format were modified based on an iterative process of discussion with adult community members (i.e., SMART mentor), COSCO organizers, and health professionals. This process was consistent with participatory action learning and is outlined in Figure B1. Through this interdisciplinary discussion the key areas of interest were defined. The following questions were initially considered the most pertinent to address in the presentation:

- What is hearing loss?
- Why is knowing more about hearing loss important?
- How do I recognize hearing loss in myself and others?
- How can I get help with hearing loss?
- What is available other than hearing aids?
- What can I do with this information?

A case study was included in the presentation to demonstrate the process of accepting and seeking help for hearing loss. This was in agreement with COSCO’s inclusion of narrative case studies in the newest presentations, as discussed in Chapter One.
Figure B1: The process of designing and developing the COSCO presentation *Hearing Health in Older Adults* followed the principles of participatory action learning, through the continuous involvement of representatives of those who would receive the presentation.
The presentation also included a slide challenging attendees to use the information learned, to improve one’s own hearing health or that of someone else. This slide was important to meet COSCO’s mandate for advocacy, as well as to provide concrete suggestions for those people attending the presentation who did not have a hearing loss.

**Previewing the presentation.**

Two pilot events took place at which I delivered the presentation in its entirety:

1. For a core group of COSCO leaders,
2. At an intergenerational community event (Intergenerational Learning Day), attended by approximately 50 students, older adults, and community members.

Feedback from both of these events and all previous stages were used to further modify the presentation. Once all suggestions were taken into account and final verification stages were passed (i.e., SMART mentor and COSCO contact), the presentation was ready for wider distribution. *Hearing Health in Older Adults* was one of 15 presentations taught to COSCO volunteer presenters in November 2011, who then made the module available across BC. It was this initial version of the presentation (November 2011) that was delivered by the presenters at the first two focus groups, FG1 and FG2. An updated version of the presentation (September 2012), including speaker’s notes, was used in part of FG3 and in its entirety in FG4.

**Evaluation through focus group discussion.**

As part of the current study, focus group discussions were used to evaluate the presentation *Hearing Health in Older Adults*. A total of 27 older adults participated in four events, with the presentation followed by a focus group discussion. Each focus group was led by an experienced moderator, who had a Discussion Guide (see Appendix E) to refer to for the questions of interest. The initial questions suggested in the Discussion Guide were designed to make the group comfortable and provided general feedback on the presentation without delving
too deeply into the attendees’ own experiences. The suggestions and comments brought forward by the groups were diverse and informative. The details of these suggestions and comments, with respect to both the presentation and the presenter, are presented in Table B1.

**Table B1**
Suggested changes to the COSCO presentation *Hearing Health in Older Adults*, as discussed by four focus groups with older adults

<table>
<thead>
<tr>
<th>Component</th>
<th>Specific suggestions or comments</th>
</tr>
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<tbody>
<tr>
<td><strong>The Presentation</strong></td>
<td></td>
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<tr>
<td>Content</td>
<td>• Prefer less technical and more personal</td>
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<tr>
<td></td>
<td>• Include more specific information on:</td>
</tr>
<tr>
<td></td>
<td>o Prevention of hearing loss</td>
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<tr>
<td></td>
<td>▪ Especially noise; the impact of noise on hair cells</td>
</tr>
<tr>
<td></td>
<td>▪ Medications and hearing loss</td>
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<tr>
<td></td>
<td>▪ Explain dieting</td>
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<tr>
<td></td>
<td>o Function of bones</td>
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<tr>
<td></td>
<td>o Tinnitus</td>
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<tr>
<td></td>
<td>o Suggested frequency of hearing tests</td>
</tr>
<tr>
<td></td>
<td>o Symptoms/what to watch for</td>
</tr>
<tr>
<td></td>
<td>o Who to see/when to see ENT</td>
</tr>
<tr>
<td></td>
<td>o Cost breakdown of hearing aids</td>
</tr>
<tr>
<td></td>
<td>o Buyer beware/clinic info</td>
</tr>
<tr>
<td></td>
<td>o Hearing aid care (i.e., hearing aids not worn at night)</td>
</tr>
<tr>
<td></td>
<td>o Wax care</td>
</tr>
<tr>
<td></td>
<td>• Remove audiogram</td>
</tr>
<tr>
<td></td>
<td>• Be aware of wording: prefer “basic and advanced” over “high and low” technology</td>
</tr>
<tr>
<td></td>
<td>• Need more clear information on what the technology levels mean to a hearing aid user</td>
</tr>
<tr>
<td></td>
<td>• Focus on the positive results of seeking help</td>
</tr>
<tr>
<td>Case study</td>
<td>• Remove: not applicable, artificial</td>
</tr>
<tr>
<td></td>
<td>• Keep: it presents more than just hearing loss</td>
</tr>
<tr>
<td></td>
<td>• Replace:</td>
</tr>
<tr>
<td></td>
<td>o shorter mini-scenarios that are more applicable to a variety of people</td>
</tr>
<tr>
<td></td>
<td>o ask the audience; “we are the case studies”</td>
</tr>
<tr>
<td>Logistics</td>
<td>• Shorter in length; one hour at the most, but this depends on the objectives of the presentation</td>
</tr>
<tr>
<td></td>
<td>• Include opportunities for questions throughout the presentation, not just at the end</td>
</tr>
<tr>
<td></td>
<td>• Ensure presentation is in PowerPoint and not Adobe</td>
</tr>
<tr>
<td>Format</td>
<td>• Use big print</td>
</tr>
<tr>
<td></td>
<td>• State the learning objectives; what people should learn from the presentation</td>
</tr>
<tr>
<td>Component, cont.</td>
<td>Specific suggestions or comments, cont.</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------------</td>
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</tbody>
</table>
| Format, cont.    | • Match the slide headings to those in the overview  
|                  | • Number the slides  
|                  | • Include more visuals  
|                  | • Speaker’s notes and spelling are very important to presenters who are not experts |

**The Presenter**

**Desired characteristics**

• Knowledgeable about topic  
• Does not read the content directly  
• Contemporary, similar age to the attendees  
• Casual, not intimidating  
• Admit to a hearing problem, especially if same gender as attendee

**Style**

• Include demonstrations if possible  
• Change style and language as needed based on attendees: “know your audience”  
• Good projection and speed  
• Speak from personal experience, especially using humour  
• Support controlled group participation and interaction

**Conclusion.**

The presentation *Hearing Health in Older Adults* was developed using a wide variety of sources. Through four focus group discussions suggestions and comments were gathered from older adults to evaluate the presentation. These comments on what was liked and disliked, and what should be changed or left the same are summarized in Table B1.

The feedback gathered in this study is important for several reasons. Firstly, the suggestions and comments will be taken into account for the improvement of the presentation *Hearing Health in Older Adults*, for continued use by COSCO. Secondly, the depth and breadth of the discussion lends support for the use of focus group discussions for the purposes of evaluating information-sharing presentations. Focus groups have the potential to be a useful tool for COSCO to effectively evaluate and subsequently improve their presentations in the future. Thirdly, many of these suggestions can be considered in the future design and development of educational tools for older adults in the field of hearing health.
Appendix C  Informed Consent Form

Evaluation of an educational presentation on
Hearing Health in Older Adults

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Heather Holliday, MSc Audiology Can., School of Audiology and Speech Science. h.holliday@alumni.ubc.ca

Co-Investigators:
Barbara Purves. Assistant Professor, School of Audiology and Speech Science.
Garnet Grosjean. Lecturer and Instructor. Department of Educational Studies.

This project is for a Masters of Science thesis. We are asking you to be in a research study because you are attending a Council of Senior Citizens’ Organization of BC (COSCO) workshop on Hearing Health in Older Adults. The purpose of this consent form is to give you the information you will need to decide whether or not to be in the study. Please read the form carefully. You may ask questions about the purpose of the research, what we would ask you to do, the possible risks and benefits, your rights as a volunteer and anything else about the research or this form that is not clear. When all your questions have been answered, you can decide if you want to be in the study or not. This process is called “informed consent.” You may attend the workshop without participating in the following discussion.

PURPOSE AND BENEFITS
This is a research study about understanding the impact of the educational presentation Hearing Health in Older Adults. The purpose of this study is to determine how to make the presentation better, as well as to determine what people might do with the information they learn. Several questions will be asked about your experiences at this presentation, including what aided your learning, as well as what can be done to improve the experience. The discussion will include questions concerning questions about seniors’ experience with hearing health. This presentation is newly developed and by participating you are influencing its ability to meet people’s needs for information about hearing health. By participating in this study, you may become more aware of your own and other’s hearing concerns, as well as what next steps are possible. The information obtained in this study will help audiologists and COSCO to improve this and other presentations.
PROCEDURES
If you choose to be in this study, you will be asked to attend one group discussion session immediately following your attendance to the *Hearing Health in Older Adults* module for which you have already registered. This session will last 1 – 1.5 hours, following a brief break with refreshments. You will be asked to complete a brief questionnaire about your hearing health and some specific demographic characteristics, including living arrangements, highest education attained, past occupations, satisfaction with income, age and gender. We request that you answer every question that applies to you; this survey is anonymous and will in no way be linked to you or your participation in the group discussion. Following completion of the questionnaire, you will be asked to participate in a discussion with 6-8 other adults who attended the same presentation. The group will sit comfortably and discuss experiences with hearing loss and this presentation. You will all be asked questions about what, if anything, you think people who attended will do with the information. By agreeing to participate, you consent to be tape-recorded during this focus group discussion, so that a careful record of what has been said by yourself and others is kept.

RISKS, STRESS, OR DISCOMFORT
There are no known physical risks for these study procedures. It is possible that you may find the discussion personal. While you may be called upon to answer a question this is to give everyone the opportunity to participate; it is at your discretion that you disclose any information. We have addressed concerns about your privacy in the following section of this consent form. Contact information for counselling and audiology services will be distributed.

OTHER INFORMATION
Being in this study is voluntary, and you may decline to enter, or withdraw from the study at any time without any consequences to involvement with COSCO or the community. Confidentiality relies on all participants understanding their role in protecting the identities and experiences of fellow participants. All participants are asked to limit their discussion of this group to that which will protect the identity of others. In our analysis, information gathered about and from you is confidential. We will code all study records, including recorded materials. The link between the code and your name will be kept at a secured location, separate from the study information. Only lab employees, all of whom have been trained in privacy and confidentiality, will have access to the link. All interview recordings will be saved on a password protected computer in a locked laboratory. We will keep the link between the study records and your name as well as a copy of the recorded interview for five years from the date of participation in the study, and then we will destroy the link and delete all recordings using
methods appropriate for destroying electronic data. The results of this study will be reported in a graduate thesis and may also be published in journal articles and books; we will not use your name.

SUBJECT’S STATEMENT

The study described above has been explained, and by signing below you voluntarily consent to participate. You have had an opportunity to ask questions, and future questions you may have about the research will be answered by the investigator listed above. If you have questions about your treatment or rights as a subject, you may call the Research Subject Information Line in the UBC Office of Research Services at the University of British Columbia, at 604-822-8598.

It is recognized that true confidentiality is dependent on yourself and all participants; you agree to not share information provided by others in this group with anyone else.

Please Print Your Name

Date

Please Sign Your Name
Appendix D  Demographic Questionnaire

INSTRUCTIONS: This is a brief questionnaire with three sections (A, B and C). Please complete every question in Sections A and B that is applicable to you: each question is appropriate for any level of hearing ability. These questions have been shown to be related to hearing health as well as management decisions about hearing health. Section C is optional: we encourage you to include anything you think is relevant in this location.

IMPORTANT:
Please DO NOT include your name on these forms. 
This questionnaire is to be completed ANONYMOUSLY.
Your answers will be used to generally characterize your group. 
Your responses here will not be connected to you, your name, or your participation in the discussion.
**Part A – Hearing Status**

INSTRUCTIONS: The purpose of this section of the questionnaire is to identify the problems a hearing loss may be causing you. Circle Yes, Sometimes, or No, for each question. **Do not skip a question if you avoid a situation because of a hearing problem.**

E-1 Does a hearing problem cause you to feel embarrassed when meeting new people?  
Yes    Sometimes    No

E-2 Does a hearing problem cause you to feel frustrated when talking to members of your family?  
Yes    Sometimes    No

S-1 Do you have difficulty hearing when someone speaks in a whisper?  
Yes    Sometimes    No

E-3 Do you feel handicapped by a hearing problem?  
Yes    Sometimes    No

S-2 Does a hearing problem cause you difficulty when visiting friends, relatives, or neighbours?  
Yes    Sometimes    No

S-3 Does a hearing problem cause you to attend religious services less often than you would like?  
Yes    Sometimes    No

E-4 Does a hearing problem cause you to have arguments with family members?  
Yes    Sometimes    No

S-4 Does a hearing problem cause you difficulty when listening to the TV or radio?  
Yes    Sometimes    No

E-5 Do you feel that any difficulty with your hearing limits or hampers your personal or social life?  
Yes    Sometimes    No

S-5 Does a hearing problem cause you difficulty when a restaurant with relatives or friends?  
Yes    Sometimes    No
Part B: Demographics

1. Gender:
   □ Male
   □ Female
   □ Other

2. Age:
   □ Less than 65
   □ 65-69
   □ 70-74
   □ 75-79
   □ 80-84
   □ 85 or more

3. What generation Canadian are you?
   □ New immigrant
   □ First generation; my parents moved to Canada
   □ Second generation; my grandparents came to Canada
   □ More than second generation Canadian

4. Which of the following best describes your current living arrangement? Please answer both A and B.
   A) Ownership:
      □ I own the space in which I live
      □ I rent the space in which I live
      □ Other (please specify)_____________________
   
   B) Support:
      □ I live alone
      □ I live with only my spouse or common law partner
      □ I live with family (children, parents, siblings) in the same house
      □ I live in a retirement community for independent individuals
      □ I live in an assisted living environment
      □ Other (please specify) _______________________

5. Which of the following best describes the highest level of education you have completed?
   □ Less than high school (secondary school)
   □ High school (secondary school) diploma or equivalent
   □ Trade-vocational, including apprenticeship
   □ College or Non-university post-secondary
   □ University; diploma, degree or certificate, or higher
6. What was/is your work or occupation? Please be specific and indicate up to three occupations that are most representative of your whole working career. For example: plumber, fishing guide, wood furniture assembler.

_________________________________
_________________________________
_________________________________

7. Please indicate whether your current income meets your needs for daily living, with 1 being less than adequate to meet your needs and 7 being more than adequate to meet your needs.

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<th>More than adequate</th>
</tr>
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<td>□ 4</td>
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<td>□ 5</td>
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</tbody>
</table>

8. For what reason did you attend today? Select all answers that apply.
   □ I have concerns for my own hearing
   □ I have concerns for the hearing of someone I regularly communicate with
   □ I attended because I am generally interested
   □ Other: _____________________________

9. Have you noticed any difficulty with your hearing or communication?
   □ Yes
   □ No

   If Yes: For how long have you noticed any difficulty with your hearing?
   □ Within the last year
   □ For more than the last year

10. Please check the most appropriate answer with regards to your eligibility for subsidized hearing care: (hearing tests, hearing aids)
    □ I am eligible for full coverage
    □ I might be eligible for full coverage
    □ I am eligible for partial coverage
    □ I might be eligible for partial coverage
    □ I am not eligible for any coverage
    □ I have no idea of my eligibility for coverage

Part C – Further comments (optional)
Please provide any further comments below that you think might be relevant.
Appendix E  Discussion Guide

Introduction
Thank you for participating in this small group discussion. My name is <Moderator should introduce yourself> and I will be providing some direction for this discussion. Today we would like to have a discussion about hearing health in older adults for roughly the next one hour. What we are trying to accomplish today is to gain an understanding of what participants do and do not like about the presentation, how it can be made better, and to determine what people might or might not do with the information they receive.

Does anyone have any questions?

We are also joined today by <Introduction of Note-taker>, who will be taking notes and running the tape-recorder throughout the discussion. This is so we have an accurate record of what everyone says. From the notes and the recording, a written copy of the discussion will be made. Any identifying information, including your names, places or other personal information will be removed or replaced with a code to protect the identity of each of you. The results from this group will be combined with those of other groups for our final report, which is for a Master’s of Science thesis project.

Are there any questions?

Each of you has now completed the Consent Form and the Questionnaire. We would like to remind you that you may withdraw from the discussion at any time, and that any questions that you have can be answered by the research team (moderator and note-taker). We also ask that each of you remember the Subject Statement you signed on the consent form, where you agreed to “not share information provided by others in this group with anyone else” so that we can all make an effort to maintain confidentiality, so that everyone feels comfortable sharing here.

Before we begin, we will go over a few ground rules that will make this more fun for everyone. First, can we please all turn off our cell phones, so we are not interrupted. Next, it is important to remember that we must take turns talking so the note taker can keep track of what was said. One of my jobs today is to make sure we discuss a few important topics. So, if I interrupt you to ask questions, please don’t think I am being rude; I am making sure everyone has a chance to contribute and that we discuss all of the important issues. We believe there is value in what each of you is here to say, and we encourage everyone to be respectful of others and their opinions. Does anyone have any questions?

Opening Questions
Purpose: get people talking and feeling comfortable with an easy-to-answer question that does not highlight any power or status differences between participants

- Just to get us started, tell us your name and your favourite food/colour/time of the year/where you have come from today
- Do not use hearing status, experience with hearing loss or hearing aids, and/or experience with COSCO as a question, to avoid initial power/dominance
- Point to anyone in the circle; randomly selecting will encourage people to not “go in order” for the discussion
Introductory Questions
Purpose: introduce the topic of discussion; get people thinking about their connection to the topics. This is an opportunity for participants to express their understanding of the issue
- Question 1: What, if anything, do you think people are hoping to learn or gain by attending this presentation?
  - Probe 1: What, if anything, do you think people will know about hearing loss prior to attending this presentation?

Transition Questions
Purpose: link the more general questions to the key questions of the study. Help participants become aware of how others view the topics; start to make connections between the topic and the participant.

Topic A: The Presentation: content and format.
- Question 2: We want to know how to improve this presentation to best meet the expectations of those who attend it. If you could change this presentation in any way, what would you change and what would you keep the same to better meet the needs of older adults?
  - Probe 2: What, if anything, will participants like about this presentation?
  - Probe 3: What, if anything, will participants dislike about this presentation?
  - Probe 4: What, if anything, do you think people will learn from this presentation?

Key Questions (should begin by 1/3 to ½ of total time)
Purpose: main questions: these answers are the main interest of the study

Topic B: Next Steps
- Question 3: What, if anything, do you think participants will consider doing with this information?
  - Probe 5: Are there any specific steps you think participants might be willing to take for their hearing health or for someone else’s hearing health?
  - Probe 6: Do you think the information provided in this presentation will change attendees’ perception of their own or someone else’s hearing in any way?

Topic C: Barriers and Facilitators
- Question 4: If there are certain steps that you think people will consider doing, what do you think will determine if they actually happen?
  - Probe 7: What might make them more likely to happen?
  - Probe 8: What might make them less likely to happen?
  - Probe 9: How soon do you think people would consider making changes? For example, within 6 months, within one year, or in more than a year.

Ending Questions
Purpose: bring closure to the discussion, while allowing reflection and analysis by the participants
- Probe 10: Who, if anyone, do you think would most benefit from this information shared today?
- Probe 11: Is there anything you came wanting to say that you didn’t get a chance to say?

Summary Question
Purpose: succinctly describe the main points for consensus by the group, to aid in later analysis
<Moderator or assistant moderator does brief but thorough oral summary (2 min) of key points and themes raised by the group with regard to the discussion around the topics and questions>

➢ Question 5: How well does that summary capture what was said?

Insurance Question
Purpose: ensure the group feels that all critical aspects were covered in the discussion
<Moderator gives brief overview of the purpose of the study, more detailed than in the introduction.>

The purpose of this discussion was to gain insight from participants of the COSCO module Hearing Health in Older Adults about the impact of the presentation, through a focus group discussion. Specifically, we were interested in what participants think works and doesn’t work in the presentation. Also of interest was what participants think others might be willing to do with the information to improve their own or other’s hearing health, and what might determine if those next steps happen.

➢ Question 6: From this review of the purpose of this study, is there anything we should have talked about but didn’t?

(Format adapted from Brotherson, 1994; Carey, 1994; Krueger & Casey, 2000)
### Appendix F  Key of Conventions used in the Transcripts and Quotations

<table>
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<tr>
<th>Symbol</th>
<th>Explanation or Meaning</th>
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<tr>
<td>...</td>
<td>Indicates the removal of text</td>
</tr>
<tr>
<td>(FGa: b-c)</td>
<td>Indicates from which focus group and what line(s) a quotation is from</td>
</tr>
<tr>
<td></td>
<td>(where a is 1 to 4 corresponding to the focus group, b-c is the transcript line number(s))</td>
</tr>
<tr>
<td>Px or M:</td>
<td>Indicates the speaker:</td>
</tr>
<tr>
<td></td>
<td>x is a number referring to a specific participant</td>
</tr>
<tr>
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<td>M is the moderator</td>
</tr>
<tr>
<td>{description}</td>
<td>Specifies context or researcher’s description</td>
</tr>
<tr>
<td>(underline)</td>
<td>Signals vocal emphasis</td>
</tr>
<tr>
<td>LOUD</td>
<td>Marks speech that is obviously louder than surrounding speech</td>
</tr>
<tr>
<td>= or -</td>
<td>No space between the words (within or between speakers)</td>
</tr>
<tr>
<td>(possible)</td>
<td>Indicate words that are possibly what was heard, or replacement of names/confidential information, or to indicate a pause</td>
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<td>Voiced laughter</td>
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<tr>
<td>lau(h)ghter</td>
<td>Indicates laughter within speech</td>
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### Appendix G  Summary of Participant Characteristics from Demographic Questionnaires

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Appendix H  The Themes and Sub-themes that Emerged from Thematic Analysis

Recognizing and Admitting:
"They all know they don’t hear very well"

"You need to recognize it first of all"
"Trust me, they all know"
"It’s a… hidden disability"

Understanding the Options:
“What to do about it"

"See your family doctor first"
"Where can you go?"

Sharing Stories and Experiences:
“Group yakkity-yaks”

“…we’d feel more involved”
“…you get people talking and admitting”
“…you have company”
“…learn from each other”

Barriers and Facilitators:
“You can lead a horse to water….”

“…less than perfect”
“It really annoys me, but it’s true”
“You can do something”
“You’ve got to give people hope”
“Why start when I can’t pay”
“Personal choice, personal responsibility”

The Presentation:
“It might push somebody like me to do something about it, right?”