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Social Marketing and Falls Prevention: Market Segmentation and Product Positioning

Eric C. Stemmler
The University of Western Ontario

Supervisor
Dr. Alan Salmoni
The University of Western Ontario

Graduate Program in Kinesiology
A thesis submitted in partial fulfillment of the requirements for the degree in Master of Arts
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SOCIAL MARKETING AND FALLS PREVENTION:
MARKET SEGMENTATION AND PRODUCT POSITIONING

(Spine Title: Social Marketing and Falls Prevention)

(Monograph)

by

Eric C. Stemmler

Graduate Program in Kinesiology

A thesis submitted in partial fulfillment
of requirements for degree of
Master of Arts

The School of Graduate and Postdoctoral Studies
The University of Western Ontario
London, Ontario, Canada

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THE UNIVERSITY OF WESTERN ONTARIO
School of Graduate and Postdoctoral Studies

CERTIFICATE OF EXAMINATION

Supervisor

Examiners

Dr. Alan Salmoni

Colleen Sharen

Supervisory Committee

Colleen Sharen

Dr. Laura Misener

Ken Bowlby

Dr. Harry Prapavessis

The thesis by

Eric Chabot Stemmler

entitled:

**Social Marketing and Falls Prevention:
Market Segmentation and Product Positioning**

is accepted in partial fulfillment of the
requirements for the degree of
Master of Arts

Abstract

The present study sets out to better understand how falls prevention can be marketed and positioned in order to increase participation rates in seniors. Market segmentation was used to create unique marketing mixes for individual groups of seniors. The senior market was segmented into frequent falling males and females, and non-falling males and females. Frequent fallers were defined by having experienced 2 or more falls in the past year, where non-fallers had experienced 1 or less falls. Twelve focus groups were conducted with thirty-five participants ($N=35$), 65 years or older. Differences were mainly found between number of falls experienced and gender. Risk perception was found to be associated with number of falls as well as participation. Specific marketing mixes are presented for each segment, and compared with a pre-existing falls prevention pamphlet. Future research should investigate the use of risk perception and age as potential segmentation criteria.

Keywords

Social marketing, falls prevention, market segmentation, product positioning, seniors, health promotion, risk perception, frequent fallers, non-fallers.

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Chapter 1

1 Introduction

1.1 Step 1: Description of Background, Purpose and Focus

The aim of this study is to better understand how falls prevention advice can be promoted to increase the participation rates of seniors in falls prevention programs. To do this, the present study was organized by using the steps of the social marketing process, outlined by Kotler (2008) in Table 1.0.

Table 1.0: The Social Marketing Process (Kotler, 2008)

The Social Marketing Process	
Step 1: Description of background, purpose and focus	<ul style="list-style-type: none"> • <i>Focus</i>: learn how health promoters can improve participation rates in falls prevention activities. • <i>Social issue</i>: falls in seniors have become a major public health concern.
Step 2: Situation Analysis	<ul style="list-style-type: none"> • Analysis of internal and external environments: strengths and weaknesses.
Step 3: Select Target Markets	<ul style="list-style-type: none"> • Define market segments based on theoretical framework and gender differences. • Evaluate segments based on set criteria. We chose Kotler and Keller, 2009. • Choose one or more segments as the focal target market.

The Social Marketing Process

Step 4: Objectives and Goals

- Better understand how to market falls prevention programs to seniors.
- Determine whether market segmentation can be used as an effective marketing strategy in the promotion of falls prevention.
- Learn how to design and position falls prevention so that promotional messages can be tailored to specific groups of senior's so that to maximize the chances of gaining their attention and interest.

Step 5: Identify alternative behaviours, Target Market Barriers and Motivators

- What do different segments think of falls prevention?
- Why aren't they currently participating in falls prevention activities?
- What would it take for them to participate?
- What strategies would work for them?
- What are they currently doing or prefer to do? (competitive behaviour)
- What are the real or perceived barriers?
- What motivates them to 'buy' the product (behaviour - fall prevention activities)?

Step 6: Craft a Desired Positioning

- Using data collected in all preceding steps, position falls prevention in a fashion that is appealing to seniors in comparison to the alternative behaviours.

The Social Marketing Process

Step 7: Develop a Strategic Marketing Mix • Product, Price, Place, Promotion.

Falls in seniors have become a major public health concern with respect to injuries, mortality, and health care costs (Rizzo, J. A., Friedkin, R., Williams, C., Nabors, J., & Tinetti, M. E. 1998; Handelsman, J., 2011). Numerous studies have reported that approximately one-third of seniors experience at least one fall per year (Yasumura, S. et al, 1994; Aoyagi K, et al., 1998; Reyes C., et al. 2005; Gill, T., et al., 2005; Speechley, M., et al., 2006). Many (40-60%) falls are said to lead to injuries in seniors, where 30-50% are categorized as minor injuries, and 6% as fractures (Tinetti, M., Speechley, M., Ginter, S., 1988; Campbell et al., 1981; Ryyananen, O.P., et al. 1991; Lord, S. R., McLean, D. & Stathers, G., 1992). The 1% of falls that result in hip fractures (Tinetti, Speechley, & Ginter, 1988; Nevitt & Cummings, 1993), often contribute to immobility and prolonged confinement, resulting in lower quality of life and depression (Suzuki & Kanamori, 2002).

In 2005, the Public Health Agency of Canada produced a report from a review of numerous databases, surveys, and studies to help better understand falls in seniors. The results can be extrapolated to represent 98% of Canadian citizens. A fall was defined as “a sudden and unintentional change in position resulting in an individual landing at a lower level such as an object, the floor, or the ground, with or without injury”. The report indicated that individuals who reported an injurious fall were most likely to be female (68%), widowed (28%), separated or divorced (46%), have completed post secondary education (34%), and have an annual income of less than \$15,000 (14%). In total, Canadians over the age of 65 reported approximately 180,000 injurious falls per year, with a steady increase from 35/1000 individuals aged 65-69, to 76/1000 individuals aged 80 and over (Public Health Agency of Canada, 2005).

Although research suggests that falls prevention activities such as medication reduction and exercise programs can help reduce the risk of falling (Chang, Morton, Rubenstein, Mojica, Mgliona, Suttorp, Roth, & Shakelle, 2004), participation rates have been found to be less than fifty percent (50%) (Robertson, Devlin, Gardner, et al., 2001), and have been found to be as low as 11% (Day, Fildes, Gordon, Fitzharris, Flamer, & Lord, 2002).

1.2 Step 2: Situation Analysis

Strengths and Weaknesses

As the number of risk factors associated with falling increases, so does the risk of falling (Bergland & Wyller, 2004). Health practitioners are able to identify people at risk of falling by performing brief risk assessments during routine primary care visits (Public Health Agency of Canada, 2005; American Geriatrics Society, British Geriatrics Society, & American Academy of Orthopaedic Surgeons Panel, 2001). Seeing as it has been reported that only 37% of elderly individuals in primary care are ever asked or spoken to about falls (Wenger, Solomon, Roth, et al., 2003), it could be argued that fall assessments are not given the attention they may deserve. This lack of attention may be due to the time, effort, and cost restraints associated with fall risk evaluations.

When brief fall assessments are performed and conclude the need for a falls prevention program, multifactorial interventions are considered to be effective (Edwards, J. et al, 2003), and are deemed useful in forming a basis for public health practice (McClure et al., 2005). Multifactorial programs address an array of factors such as vision, physical activity, balance, gait, chronic conditions, medication use, and environmental hazards. In Australia, over the course of four years, the Stay on Your Feet multifactorial program reported a 25% lower falls incidence rate in the intervention group compared to the control group (Kempton, Van Beurden, Sladden, Garner, & Beard, 2000). Intervention

subjects were found to have significantly more awareness regarding the risk of falling, and were more likely to believe falls were preventable (Kempton, Van Beurden, Sladden, Garner, & Beard, 2000).

Despite the literature supporting the benefits associated with falls prevention programs (Chang, Morton, Rubenstein, Mojica, Mgliona, Suttorp, Roth, & Shekelle, 2004), participation rates remain sub-par (Robertson, Devlin, Gardner, et al., 2001; Day, Fildes, Gordon, Fitzharris, Flamer, & Lord, 2002). According to the U.S. Department of Health and Human Services (2010), in 1997, only 15% of adults participated in the recommended amount of physical activity and 40% of adults engaged in no leisure-time physical activity whatsoever. By age 75, one third of men, and half of women reported participating in zero physical activity (U.S. Department of Health and Human Services, 2010). In addition, Mills and colleagues (1996), suggested that younger age is a significant unique factor ($p < 0.01$) that is related to the enrollment in exercise programs. In their review of 99 single and multifactorial RCTs from the Cochrane systematic review of falls prevention interventions, Nyman and Victor (2011) concluded that at 12 months post RCT intervention, on average only half of community-dwelling seniors were likely to still be adhering to falls prevention activities.

Whitehead, Wundke, and Crotty (2006) set out to determine the barriers to implementing successful falls prevention strategies. Participants who had attended an emergency department for having experienced a fall were interviewed to ascertain the reasons for not taking up a falls prevention strategy, their fall-related health state, and the likelihood of undertaking a falls prevention strategy in the future. After having experienced a fall that required a visit to the emergency room, only 52% of participants considered participating in falls prevention activities. There were high levels of reluctance to undertake prevention activities, with 72% of individuals reluctant to participate in exercise classes, 59% reluctant to cease psychotropic medications, 43% reluctant to have in-home safety assessments, and 28% reluctant to take osteoporotic medication. They

concluded that there were significant obstacles to the implementation of most of the different prevention guidelines examined. Specifically, treatment of osteoporosis was more acceptable to participants than exercise classes, cessation of psychotropic medication, and having an in home safety assessment.

Specific barriers to participating in falls prevention programs were noted by seniors as including an inevitable physical deterioration with age, low self-efficacy, no perception of needing help, social stigma, provoked fear with scare tactics, lack of previous exercise habits, physical discomfort from exercise, personality types, self perception of being too old, poor knowledge of appropriate exercises, associated costs, intrusiveness, and the provision of a 'one size fits all' program (Bunn, Dickinson, Bennett-Page, McInnes, & Horton, 2008). One of the toughest barriers to the adoption of falls prevention strategies has been reported as the disbelief that the risk of falling can be reduced (Managing innovation, marketing consulting, 2000). Factors that were found to facilitate falls prevention programs included maintenance of independence, appealing information format, personalized modifications, fun, physical benefits, and the tailoring of programs to meet specific lifestyle needs (Bunn, Dickinson, Bennett-Page, McInnes, & Horton, 2008). Similarly, messages promoting general health, well being, independence, and other positive benefits of healthier behaviours were suggested to be more effective in the promotion of falls prevention (Yardley, Donovan-Hall, Francis, & Todd, 2006).

Chapter 2

2 Marketing of Falls Prevention

2.1 Social Marketing: Mass Marketing versus Market Segmentation

Historically, falls prevention programs have been promoted using mass marketing approaches. The Stay on Your Feet falls prevention campaign (Kempton, Van Beurden, Sladden, Garner, & Beard, 2000), followed a strategy that focused on raising awareness, community education, policy development, and working along side healthcare professionals. Their target market inclusion criteria consisted of all individuals over the age of 60 years. Similarly, the Connecticut Collaboration for Fall Prevention targeted seniors by using posters, internet, newspapers, television, billboards, public service announcements, and personal outreach at senior centers to motivate patients to discuss falls with their families and physicians (Chou, Tinetti, King, Irwin, & Fortinsky, 2006).

Mass marketing and mass media campaigns have been used to educate and influence individuals' attitudes with respect to health behaviours in the past (Wammes et al., 2005). Hill (2004) suggests, however, that most mass media health promotion campaigns are effective at increasing knowledge, but appear to have little impact on behaviour change; "Mass media alcohol promotion campaigns targeting a general audience or audiences of young people are not effective." (Hill, L., 2004, p. 2).

In their attempts to better understand the impact of a national media campaign aimed at preventing weight gain in the Netherlands, Wammes and colleagues (2005) investigated their target audience's exposure to the campaign, as well as its effect on awareness of personal weight status, attitudes, and motivations towards the prevention of weight gain,

and risk perceptions of being overweight. Mass media messages were developed to inform 25 to 35 year olds that, (1) gaining an extra kilogram of body weight each year could be compromising to one's health; (2) there is a need for small and permanent changes in diet and physical activity; and (3) to improve awareness about gradual weight gain and personal weight status.

Data were collected at four different times via telephone surveys. Respondents were selected by Random Digit Dialing and interviews lasted about 15 minutes each. Demographic data including sex, age, weight, height, ethnicity, marital status and educational level were evaluated. Measures of BMI were also calculated from self-reported weight and height.

Campaign exposure was measured in two ways. First, campaign recall was assessed by asking whether respondents were currently aware of a campaign that aimed at preventing people from becoming overweight. If they did not recall the campaign, respondents were asked specifically whether they knew about the Netherlands Nutrition Centre campaign called 'Maak je Niet Dik!' (Don't get fat!'). If they recognized the slogan, respondents were then asked where they had heard about the campaign. Message recall was assessed by asking respondents if they could remember one of the campaign's messages.

Self-rated body weight was assessed against BMI to evaluate optimism versus pessimism. Attitudes towards prevention of weight gain were measured with three 5 point scales ranging from very bad/unimportant/unpleasant to very good/important/pleasant. Risk perceptions were measured on a 5 point Lickert scales, based on perceived severity and vulnerability as defined by the Health Belief Model (HBM). Stages of change were used to assess the extent to which respondents were motivated to prevent gaining weight.

In their results, they found that all respondents displayed high levels of awareness with respect to personal weight status. Risk perceptions of being overweight were also found to be constant. Interestingly, however, although the majority of respondents perceived weight gain as being serious, only one-third perceived themselves as being vulnerable to gaining weight. When assessing campaign awareness, they determined that 61% of respondents were aware of the campaign after post-test 1, and 66% after post-test 2. Familiarity with specific campaign activities dropped from 20% in post-test 1, to 10% in post-test 2. Furthermore, the impact of the first campaign was not found to be significantly associated with changes in awareness of personal body-weight status, weight-related risk perceptions or motivation to prevent weight gain. Interaction analyses indicated that effects of the campaign did not differ significantly among individuals who were overweight, female, and less educated, as compared to those who were normal-weight, male and with higher education.

In conclusion, Wammes and colleagues noted that although 65% of individuals knew about the campaign, it was more than likely due to free publicity from other media sources such as the news. Although the campaign was found to be associated with more positive attitudes towards prevention activities, and higher self-reported BMI, no effects were found on awareness of personal body weight, overweight-related risk perception, or motivation to prevent weight gain.

In their longitudinal study on the impact of an anti-smoking media campaign in Massachusetts, Siegel and Biener (2000) found that their media campaign was most effective in reducing smoking initiation in younger adolescents, but not older adolescents. As compared with younger adolescents, older adolescents did not respond well to campaign messages (Siegel & Biener, 2000).

Niederdeppe and colleagues (2008) reported similar findings with respect to mass marketing in their smoking-cessation media campaigns. They concluded that different

groups of individuals reacted differently to certain health promotion messages. Specifically, they found that certain messages appeared to be less effective at promoting attempts to quit among less-educated populations, as compared to more educated populations (Niederdeppe, Kuang, Crock, & Skelton, 2008).

In comparison to consumer marketing, it is suggested that mass marketing may not be effective when attempting to influence health behaviours (Niederdeppe, Fiore, Baker, & Smith, 2008; Niederdeppe, Kuang, Crock, & Skelton, 2008). When marketing health behaviours, Kotler, Cheng and Lee (2011), suggest a process known as social marketing:

“Social marketing is a process that applies marketing principles and techniques to create, communicate, and deliver value in order to influence target audience behaviors that benefit society as well as the target audience.” (Kotler, P., Cheng, H., & Lee, N. R., 2011, p. 2).

Market segmentation is a crucial component to the social marketing process. It allows for the division of large heterogeneous groups into smaller homogeneous subgroups, and increases the effectiveness of marketing efforts by tailoring specific messages and communication channels to specific market segments (Flay & Burton, 1990). Segments are typically defined by demographic, psychographic, and geographic variables (Kotler 2002).

The VERB campaign used market segmentation to promote physical activity among ‘tweens’ (9 to 13 year olds) (Huhman, Berkowitz, Wong, Prosper, Gray, Prince, et al., 2008). They segmented the ‘tween’ market into ethnic backgrounds consisting of African-Americans, Hispanics, Asians, and American Indians. Formative research and focus groups were used to better understand motivators, barriers, and preferences to physical activity for each segment. Data were gathered so that campaign messages could be presented in an attractive manner to each segment (Huhman, Berkowitz, Wong,

Prosper, Gray, Prince, et al., 2008). They concluded that messages to African-Americans should involve music and sports celebrities. Hispanics responded best to advertisements that emphasized family values, had strong emotional tones, were in Spanish, and that were delivered by respected authority figures. Asian Americans were found to relate to messages promoting fun and social activities that fostered self gratification. Messages for American Indians were tailored for specific groups by using native clothing and landscape backgrounds with which they could identify (Huhman, Berkowitz, Wong, Prosper, Gray, Prince, et al., 2008).

The Australian Commonwealth Department of Health and Aged Care suggested that an ideal falls prevention information strategy would be one that adopts a multidisciplinary approach to media communication in order to reach different groups of seniors (Managing innovation marketing consulting, 2000). Research has suggested that health promotion messages related to falls prevention may sometimes be perceived negatively (Yardley & Smith, 2002). Seniors may fear the functional limitations that result from falling, may be concerned about indignity, damage to their confidence, and social embarrassment (Yardley & Smith, 2002). It is therefore important to understand how to effectively communicate to different groups of seniors.

Hughes, van Beurden, Eakin, Barnett, Patterson, Backhouse, Jones, Hauser, Dip, Beard, and Newman, (2008) conducted eight focus groups (N=73) among individuals 70 years and older to determine which types of messages would work best for the promotion of falls prevention. They asked participants to choose between three messages, and discussed each in detail. They provided three different types of messages to their participants: (1) If you are more active, you will be less likely to fall; (2) If you are more active, you will stay independent for longer; and (3) If you are more active, you will stay healthy for longer. The majority of participants (44.6%) favored messages related to independence. Reasons given for this preference were because independence is the last thing people want to lose; it keeps people out of old-age homes; people tend to miss

their independence; and people do not want to rely on others. Some individuals, however, displayed concern about being too independent; that loss of independence was inevitable; that eventually all people need to accept help; and that you cannot stay independent forever. Nineteen percent (18.9%) of participants chose a 'stay healthy' message as being most appealing to them. This group often described health as being a prerequisite for independence. Fifteen percent (15%) of participants could not choose between the 'stay independent' and 'stay healthy' messages, and 16.2% liked all three messages. Not only did zero participants chose the 'less likely to fall' message, but suggested that it may have negative connotations.

Nyman and Yardley (2009b), reported similar findings in relation to the tailoring of messages to specific groups of seniors. Adults aged 60 to 80 (n=302) were randomized into two groups and instructed to visit a website to learn about falls prevention advice. One group was given generic advice to read, while the other had advice tailored specifically to self-perceived balance and activity preferences. The Attitudes to Fall-Related Interventions Scale (AFRIS) was used as a measurement tool. They concluded that seniors reported falls prevention advice to be more beneficial and personally relevant when messages were tailored to individual needs with respect to balance, preferred activities, and fall-risk-related health conditions (Nyman & Yardley, 2009b).

Despite research demonstrating the potential benefits associated with the tailoring of messages to specific groups of seniors, limited research has been done with respect to market segmentation and its use in falls prevention. Understanding different segments' attitudes and beliefs on falls prevention, as well as which communication strategies may be most effective for each segment could help in positioning the product or message in an attractive manner to seniors.

2.2 Step 3: Selection of Target Markets

Theoretical Framework

According to Slater (1996), observable a-priori segmentation variables such as gender and race are most commonly used in health behaviour research. Post-hoc cluster analysis is generally noted as being one of the more effective methods for market segmentation, however, it requires the collection of numerous surveys that regress individuals into homogenous groups based on demographic, attitudinal, and behavioural variables. Given time and resources of the present study, a-priori segmentation was deemed to be most feasible. Segments have been established by analyzing secondary data related to a number of health behaviour frameworks. Information on gender differences, attitudes, risk perception, and epidemiological data related to falls in seniors was analyzed, and served as the basis for the chosen segmentation criteria.

Although influencing behaviours could arguably be the goal of all marketing efforts, when promoting health lifestyle changes, people tend to be more resistant to persuasive communication (Andreasen, 1995; Hornik, 1997; Susser, 1995). When using demographic and geographic segmentation variables, the assumption is made that similarities in education, race, and cultural factors equate to common life experiences, and therefore lead to similar health behaviours. Although many similarities may exist between some individuals, these characteristics do not always lead to similar values, norms, attitudes and behaviours, and should not be considered as causal determinants for health attitudes and motivations (Slater, 1996).

In his ecological approach to health promotion, McLeroy (1988), addresses the importance of interventions that are directed at understanding intrapersonal, interpersonal, organizational, community, and public policy factors that help support, build, and maintain health behaviours (McLeroy, 1988). The social ecological model assumes that changes made within a social environment result in changes in individuals. The model uses various psychological theories that have been linked to changing health

behaviours such as the social cognitive theory (SCT) (Bandura, 1986; Bandura, 1992), the theory of reasoned action (TRA) (Ajzen, I., & Fishbein, 1980; Fishbein, et al., 1993) and the transtheoretical model (TTM) (Prochaska et al, 1992). These theories propose that health behaviours result from a combination of behaviour-specific cognitions and environmental forces. The underpinnings of these, and other similar theoretical models have been used to define segments in past, as well as the present social marketing projects (Williams & Flora, 1995; Maibach, 1996; Rajiv, 2009; Kazbare, 2010).

The Health Belief Model

Among one of the more commonly used models for segmentation is the health belief model (HBM) (Janz & Becker, 1984). It has been used extensively by health researchers to help understand how to motivate people to take action in preventing disease (Alcalay & Bell, 2000). The HBM suggests that decisions to adopt behaviour change are based on an individual's perception of risk, as well as their belief as to whether the benefits of the recommended behaviour outweigh the perceived barriers associated with its adoption (Janz & Becker, 1984). Perceived risks reflect an individual's beliefs about how susceptible they are to the condition, as well as how severe they perceive the condition to be. As the susceptibility and severity of a condition increases, so does risk perception. However, if one of these variables is perceived as being low, risk perception decreases. Personal cost-benefit analyses comparing the benefits of, and barriers associated with behaviour change define the course of action for either accepting or discounting recommended health behaviours (Alcalay & Bell, 2000). If an elderly individual understands the potential severity of a fall, and does not believe they are susceptible to falling, they will be less likely to partake in fall prevention activities.

Social Cognitive Theory

The social cognitive theory (SCT) (Bandura, 1977) is a psychological conceptual framework to help understand the relationships between behaviours, personal factors and the environment. It states that all behaviours occur within a given situation, which affects how an individual behaves. The environment can affect a person's behaviour with or without the individual being aware. The level of physical activity in which one participates may be affected by their level of knowledge, social support, risk perception, time, and confidence in making a permanent behaviour change within the given environment. The social cognitive theory suggests that if social marketers can learn how to make changes in one's environment, they increase the likelihood of changing behaviours.

Risk Perception Attitude

The risk perception attitude (RPA) framework adds to the health belief model by suggesting that the effect of perceived risk on people's motivations and behaviours is also moderated by how confident they are in behaving a certain way (Rimal and Real, 2003). According to the framework, individuals who feel efficacious towards the adoption of a behaviour, may view potential risks as challenges to be overcome, whereas those who lack efficacy may interpret situations as fate (Rajiv, 2003).

In their efforts to determine an effective segmentation model for social marketers, Rajiv and colleagues (2003) used the RPA framework to identify four segments based on attitudinal beliefs. The first group was characterized as the *responsive* attitude, displaying high perceived risk and high perceived efficacy beliefs. Because these individuals are aware of their risk status and believe they possess the skills to protect themselves, they are more likely to be motivated to enact self-protective behaviours. Second, individuals with high risk perceptions but low self-efficacy are characterized as the *avoidance* attitude group. These individuals have high risk perception, however their lack of confidence suppresses their motivation. The third group is characterized as the

proactive attitude, and consists of people with low risk perceptions but high efficacy beliefs. Although these people are not motivated by their perceived risk, they are still motivated to make healthy choices for other reasons. Finally, the fourth group is characterized as *indifference attitude*. They believe that they are not at risk, and that they cannot make changes to avoid potential threats to their health.

These segments were identified via perceived risk and efficacy belief measures. Perceived risk was calculated as a product of susceptibility and severity. Two scales from *extremely low* (1), to *extremely high* (5) were used to determine susceptibility:

- (a) “Compared to most people my age, I understand that my likelihood of getting skin cancer is ...”
- (b) “the likelihood of my getting skin cancer is ... ”

Two scales ranging from (1) *very strongly disagree* to *very strongly agree* (7) were used for severity:

- (a) Skin cancer is serious.
- (b) Skin cancer can be more dangerous than most people realize.

Efficacy beliefs were viewed as the product of self-efficacy and response efficacy. The first item stated:

“I am confident I can protect myself against skin cancer”. Responses ranged from (1) *not at all confident* to (5) *extremely confident*.

The response efficacy item stated:

“There are many things I can do to make sure that I remain free of skin cancer”.

Responses ranged from (1) *strongly disagree* to (5) *strongly agree*.

On the basis of responses about risk perceptions and beliefs about self-efficacy, Rajiv and colleagues (2009) used ANCOVA models to compare these four different RPA attitude groups against knowledge of HIV, HIV testing uptake, and condom use. Three questions were used to gauge perceived risk of contracting HIV: “how likely they thought they were to become infected in the next 6 months, the next 12 months, and in their lifetime”. They measured efficacy beliefs based on social cognitive theory. Participants were asked questions relating to how confident they felt they were to engage in behaviours relating to condom use; “initiate conversation about condom use, talk about condom use with sexual partner, use a condom during every sexual act, and negotiate condom use with sexual partner”. Responses were measured on a 5 point scale. The study concluded that the RPA is a theoretically sound technique for segmenting a market based on attitudes such as risk perception and self efficacy (Rajiv, 2009).

Similar to the RPA framework is Protection Motivation Theory (PMT), which proposes that individuals protect themselves based on four factors: perceived severity, perceived probability of occurrence, the efficacy of the recommended preventive behaviour, and perceived self efficacy. (Rogers, 1975). Protection motivation is derived from threat appraisal and coping appraisal. Threat appraisal assesses the severity and seriousness of a given situation, whereas the coping appraisal is how an individual responds to the situation. Coping appraisal is defined by efficacy and self efficacy, where efficacy is the belief that the recommended behaviour will prevent the threat, and self efficacy is the individual’s confidence in adopting the behaviour.

The present study has chosen to segment the senior population based on the successful use of the social cognitive theory, health belief model, the PMT, and the RPA framework, in other segmentation models (Rajiv, 2009). Seeing as one of the toughest barriers to the adoption of falls prevention strategies has been reported as being the disbelief that the risk of falling can be reduced (Managing innovation marketing consultancy, 2000), a better understanding of people’s risk perception may prove to be

important when attempting to improve the uptake of falls prevention programs. Efforts may therefore be needed to overcome personal risk denial if the goal is to convince seniors on the importance of falls prevention (Yardley, 2006). Figure 1.0 provides an outline of the theoretical framework used for the segmentation criteria in the present study.

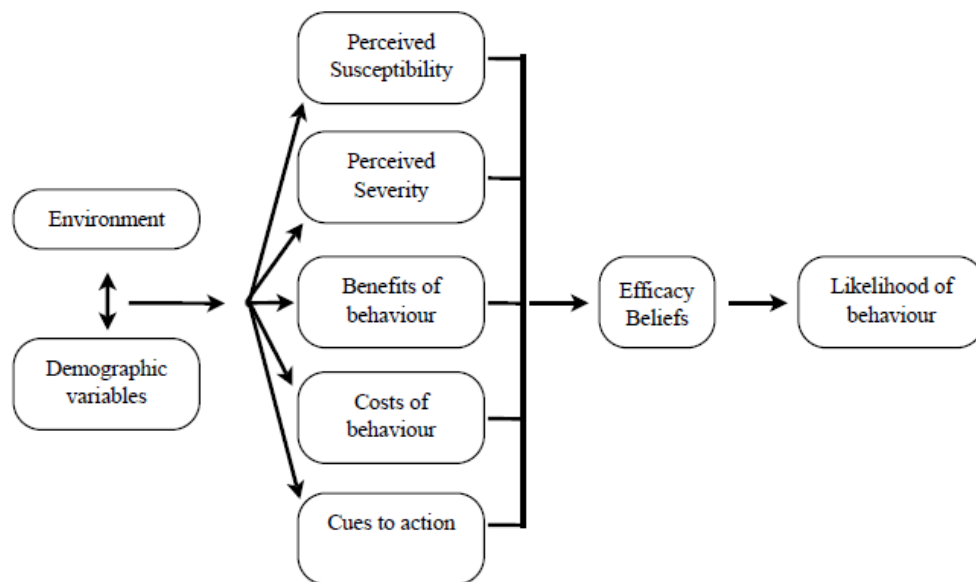


Figure 1.0: Theoretical Framework based on SCT, HBM, PMT, and RPA framework.

2.3 Segmentation Variables

Four segments have been identified for the present study that are based on demographic, lifestyle, risk perception, and efficacy belief characteristics.

Frequent-fallers and Non-fallers

Similar to past research (Luukinen, Koski, Kivela, and Laippala, 1995) the present study has defined a frequent faller as an individual who has fallen two or more times in the past year. A non-faller was defined as an individual who has fallen 0-1 times in the past 12 months. Characteristics distinguishing frequent fallers from non-fallers have been extensively investigated. In their comparison of frequent, single, and non-fallers, Vassalo, Sharma, and Allen (2002), found that fallers were more likely to have a past history of falls, hearing impairment, unsafe gait, and be taking sedative medications in comparison to non-fallers (Vassalo, et al., 2002). In addition, frequent fallers were more likely to be confused, take antidepressants, and have longer stays in hospitals as compared to non-fallers. (Vassalo, et al., 2002).

Melzer and Kurz (2009), used the self-reported late life function and disability instrument (LLFDI) to measure differences between frequent fallers and non-fallers. Falls, cognitive function, balance, and timed up and go were also evaluated. They found that significant differences in overall function existed between frequent fallers and non-fallers mainly due to lower extremity function scores. Specifically, they concluded that balance function, self-reported function, and disability limitations were strongly related to recurrent fallers (Melzer & Kurtz, 2009).

In their study of different cognitive profiles between single, recurrent, and non-fallers without dementia, Anstey, Wood, Kerr, Caldwell, and Lord (2009), found that compared to non-fallers, frequent fallers were significantly older, female, had poorer physical and mental health, postural sway, and cognitive scores. Adults who reported recurrent falls in the previous year performed poorer on measures of processing speed and executive function as compared to non-fallers. They discovered that neurological conditions were significantly associated with recurrent falls, and suggested that occasional falls may be associated with age-related changes in the pre-frontal cortex leading to failures in executive control, whereas recurrent falls result from generalized cognitive decline (Anstey et al., 2009).

As mentioned earlier, perceived risks can reflect an individual's beliefs about how susceptible they are to a medical condition, as well as the severity of that condition (Janz & Becker, 1984). Frequent fallers have been reported to perceive falling as a greater threat to their health as compared to non-fallers. Hughes and colleagues (2008) found that individuals with no fall history reported significantly lower fall risk perception as compared to those with a history of falls. It is possible that these individuals understand the consequences associated with falling, and consider themselves to be susceptible to future falls (Hughes and colleagues, 2008; Managing innovation marketing consultancy, 2000). Taking the health belief model (Janz & Becker, 1984) into account, these individuals may recognize a need for change and may be more inclined to take action. In contrast, non-fallers do not perceive themselves to be at risk of falling (Hughes et al., 2008; Managing innovation marketing consultancy, 2000) and therefore are less likely to see the need for behaviour change (Janz and Becker, 1984). Individuals who have experienced adverse health effects in the past often have different internal beliefs and attitudes with respect to physical outcome expectancies (Bandura, 1986 & 1992; 1992) and/or perceived personal risk (Snyder & Rouse, 1995).

The activities-specific balance scale (ABC), developed by Powell and Myers (1995) is an extension of the falls efficacy scale (FES) (Tinetti, Richman, & Powell., 1990), both of which measure how confident an individual is that they can perform important activities of daily life without falling. Powell and Myers (1995) found that participants who had reported falling in the past year had lower efficacy beliefs as compared to people who had not fallen ($p < 0.058$). Furthermore, they found that those who sustained an injurious fall also displayed lower efficacy beliefs than those who had not sustained a fall. This difference, however, was not significant when compared to individuals who had fallen and not sustained an injury.

It has also been suggested that seniors who consider themselves to be independent and/or physically fit, do not see the need for falls prevention advice, however feel it is important for others who are older or more disabled (Yardley, Donovan-Hall, Francis, & Todd, 2006; Hughes et al, 2008; Managing innovation marketing consultancy, 2000; Dollard, Turnbull, Newburry, & Barton, 2008). Many seniors, especially those who may be relatively healthy and active, view prevention advice as obtrusive to their independence and autonomy (Yardley et al, 2006; Managing innovation marketing consultancy, 2000). Hughes and colleagues (2008) concluded that participants with no previous fall history and with positive self-perceptions of health, reported lower perceived fall risk. Seniors that have good physical and mental health, as well as limited fall history were more likely to reject personal risk of falling (Managing innovation marketing consultancy, 2000; Braun, 1998). Those who experience near misses (Health Education Board for Scotland, 1999), unexplained and/or injurious falls were more likely to perceive higher personal risk and partake in falls prevention activities (Managing innovation marketing consultancy, 2000). See Table 2.0 for a comparison between frequent and non-fallers.

Table 2.0: Frequent vs. Non-fallers

Frequent Fallers vs. Non-Fallers	
	<i>More likely to have:</i>
<i>Frequent Fallers</i>	<ul style="list-style-type: none"> A history of falls Hearing impairment Unsafe gait Sedative medications Antidepressants Longer stays in hospitals Nursing home discharge Disability limitations Poorer physical health Poorer mental health Poorer cognitive test scores Increased postural sway Increased risk perception Take part in falls prevention activities Lower falls efficacy beliefs
<i>Non-Fallers</i>	<ul style="list-style-type: none"> Stronger lower extremity scores Better overall function Better balance Better self-reported function Better processing speed Better executive functions Better falls efficacy beliefs Do not see need for advice Think advice is for older more disabled individuals View advice as obtrusive to their independence Reject personal risk of falling

Gender

Liang, Shediak-Rizkallah, Celentano, and Rohde (1999) issued 4455 telephone surveys through the Behavioural Risk Factor Surveillance System. They divided the sample into eight age groups (18-24, 25-39, 40-54, and 55+), and gender. Correlation and oblique factor analysis examined the patterns of 8 to 11 preventive health behaviours; medical checkup, exercise, cholesterol checkup, mammography, clinical breast exam, smoking, drinking, driving after drinking, and nutrition. Females were significantly more likely to report doing healthy behaviours across all four age groups. They were found to have significantly more correlations with respect to healthy behaviours with twenty-five percent of the correlations at $p < 0.0001$, as compared to 12% for males. Males were found to have a larger number of significant correlations to unhealthy behaviours across all four age groups. Risk-taking behaviours among older males failed to have sufficient correlations to form a behavioural cluster, suggesting risky behaviour was distributed across age and activity. Younger and middle-aged females, however, produced a cluster defined by behaviours such as clinical breast examination, pap smear, and medical checkups. This information allows health promoters to consider different behavioural approaches and suggests gender and age sensitivities within target markets.

Many other gender differences exist with respect to health care and health behaviours. Males are found to have lower risk perception with respect to falls (Hughes et al., 2008.), fall significantly less, are less likely to sustain fractures (Campbell, Spears, & Borrie, 1990; Robbins, et al., 1989), and are more physically active (Denton & Walters, 1999; Lee, 2005). Females tend to report more health problems that are suggested to be related to reduced access to material and social conditions that foster health (Arber & Cooper, 1999). Females have also reported lower levels of self esteem and perceived control with respect to health (Mirowsky & Ross, 1989), and are more likely to visit medical practitioners and receive home medical visits (Redondo-Senddino, Guallar-

Castillon, Banegas, & Rodriguez-Artalego, 2006). Stock, Willie, and Kramer (2001) concluded that males were significantly more likely to have higher body mass indexes (BMI) and use alcohol and marijuana more frequently, whereas females have better nutrition and hygiene habits. Fear of falling has predicted lower levels of physical activity in older women (Bruce, Devine, & Prince, 2002), and therefore reduces the probability of undertaking programs aimed at improving strength and balance. See Table 3.0 for a list of gender differences.

Table 3.0: Falls prevention and health behaviour gender differences

Males	Females
Less correlations to health behaviours across age	More correlations to health behaviours across age
More correlations to unhealthy behaviours	Less correlations to unhealthy behaviours
Lower risk perception	More likely to get checkups
Less likely to visit a medical practitioner	Higher risk perception
Less likely to receive home medical visits	Experience more falls
Incur less fractures form falls	Report more health problems
Experience less falls	Report lower levels of self-esteem
More physically active	Report lower levels of perceived control
	Fear of falling reduces physical activity

Table 4.0 outlines the segmentation model used for the present study. It is based on falls epidemiological data and the use of the health belief model, social cognitive theory, and the RPA framework in past segmentation models. The senior market has been segmented into frequent falling males, frequent falling females, non-falling males, and non-falling females.

Table 4.0: Gendered Falls-Risk Segmentation

Gendered Falls-Risk Segmentation		
	Non-fallers	Recurrent Fallers
Male	<i>Non-falling males</i>	<i>Recurrent-falling males</i>
Female	<i>Non-falling females</i>	<i>Recurrent-falling females</i>

According to Kotler and Keller’s criteria for effective segmentation (2009), segments should be measurable, substantial, accessible, different, and actionable. Measurability is noted as the extent to which segments can be identified by their respective variables. Substantiality refers to the size of each segment. Segments that are too small may not warrant the time and resources needed to meet campaign goals, whereas segments that are too big may have other internal differences that may not be accounted for. Differentiability is noted as the extent to which segments differentiate with respect to wants, needs, and marketing mixes. Accessibility refers to the level of difficulty at reaching the segment. Actionability refers to whether a marketing mix can be designed for each segment so that it serves their needs effectively and efficiently. The measurability and substantiality criteria have been evaluated via thorough literature review and secondary data analysis. Whereas gender differences tend to be inherent in themselves, frequent and non-faller segments will be distinguished by the number of falls individuals have experienced in the past year.

Data from previous falls research have provided substantial information to help define segment sizes for this study. The number of seniors in Canada is projected to increase from 4.7 million to 10.9 million between 2009 and 2036 (Statistics Canada, 2010). Seeing as approximately one-third of seniors experience at least one fall per year (Yasumura et al, 1994; Aoyagi K, et al., 1998; Reyes C., et al. 2005; Gill, T., et al., 2005;

Speechley, M., et al., 2006), it can be estimated that approximately 3.6 million seniors will experience a fall in 2036. The Canadian Community Health Survey's sample of 29,000 is representative of 3.8 million Canadians aged 65 and over. They suggest in total, Canadians over the age of 65 self-reported approximately 180,000 injurious falls per year, with a steady increase from 35/1000 individuals aged 65-69, to 76/1000 aged 80 and over (Public Health Agency of Canada, 2005).

Table 5.0: Descriptive Statistics based on retrospective falls status

Anstey, et al., 2009		
	<i>Non-Fallers</i>	<i>Frequent Fallers</i>
<i>Males</i>	0.445	0.055
<i>Females</i>	0.418	0.082

$N = 658$

Based on 4.7 million seniors currently residing in Canada, Table 5.0 suggests that there should be 2,091,500 non-falling males; 1,964,600 non-falling females; 258,500 frequent falling males; and 385,400 frequent falling females.

Table 6.0: Descriptive Statistics based on retrospective falls status

Melzer et al., 2009		
	<i>Non-Fallers</i>	<i>Frequent Fallers</i>
<i>Males</i>	0.24	0.03
<i>Females</i>	0.65	0.08

$N = 100$

Based on 4.7 million seniors currently residing in Canada, Table 6.0 suggests that there should be 1,128,000 non-falling males; 3,055,000 non-falling females; 141,000 recurrent-falling males; and 376,000 recurrent-falling females. With the senior population expected to more than double by 2036 (Statistics Canada, 2010), it can be argued that the segments chosen for the present study are both measurable and substantial (Kotler & Keller, 2009).

Chapter 3

3 Step 4: Objectives and Goals

3.1 Evaluation of Segmentation Criteria

The goal of this study was to determine whether market segmentation could be used as a marketing strategy to promote behaviour change with respect to falls prevention. Specifically, the aim was to better understand how to design and position falls prevention so that promotional messages could be tailored to specific groups of seniors'. The differentiability, accessibility, and actionability criteria for segmentation were evaluated (Kotler & Keller, 2009). Focus groups were held with each segment to provide insight as to whether market segmentation could be used as an effective marketing strategy in the promotion of falls prevention. The hypothesis for the present study was that differences among segments would exist, and that unique marketing mixes would be required for each segment.

Research Questions

1. Do different groups of seniors require different marketing efforts to promote falls prevention activities?
2. What potential messages, words, and formats may work best in the design of marketing efforts for different groups of seniors?
3. What communication channels can be used to access seniors?

3.2 Methods

Focus Groups

In health promotion, the majority of formative research is used for materials, instruments, and the development of intervention strategies (Gittelsohn, J. et al., 2006). Formative research has been used for the development of interventions by identifying salient themes, social norms (Ayala, et al., 2001; Meade et al., 2002), communication channels (Cortes, Gittelsohn, Alfred, & Palafox, 2001), and understanding the target audience in order to better serve their needs (Ayala et al., 2001; Cortes et al., 2001; Gittelsohn et al., 1996). According to Gittelsohn, J. et al., (2006), the primary methods used in formative health research are typically direct observation, in-depth interviews, focus groups, as well as structured and semi-structured surveys. Using multiple methods provides the opportunity to develop strong intervention frameworks, efficient guides to planning, and a better understanding of the target audience (Gittelsohn et al., 2006). According to Weinreich (2011) focus groups are often the research method most commonly associated with social marketing programs. They are effective in obtaining insight into people's perceptions, beliefs, and opinions related to a particular issue (Weinreich, 2011).

In the Trial for Activity in Adolescent Girls (TAAG), Staten, Birnbaum, Jobe, and Elder (2006) conducted focus groups with 'tween' girls (aged 9 to 13) first, to define market segments, and second, to learn how to tailor messages to serve each segment's needs. Discussions consisted of different sources of information, messages, communication channels, and activities each segment might find appealing. Seven segments were defined; athletic, preppy, quiet, rebel, smart, tough, and other. Descriptions for each segment were established, along with different physical activity interests and potential marketing strategies.

Not only did the Trial for Activity in Adolescent Girls (Staten, et al., 2006) use focus groups to define their segments, but they used the same groups to better understand how to market to each segment. The present study built on this methodology by first, defining the segments, and second, conducting focus groups with each segment. Collecting

information from primary segment sources may prove to be a valuable method to better understand seniors' perceptions, opinions, attitudes, and beliefs about falls prevention.

When studies that involve sensitive subject matter, such as falling, drug use, or other activities that may accompany stigma, there is room for social desirability bias. Social desirability bias refers to the tendency for people to provide socially desirable responses that reflect how they truly feel (Grimm, 2010). It may also be pronounced when individuals are asked to provide answers in front of others; especially with regards to age and gender differences. An additional advantage to segmenting the market by gender is that it may reduce social desirability bias by not requiring males and females to discuss this sensitive subject matter together (Grimm, 2010). It is possible for results to be altered if participants desire to appear strong, independent, or even attractive to the opposite sex.

Participants

Participants for the present study were recruited from three retirement communities in Southwestern Ontario who agreed to participate in the study. Participants had to be 65 years or older, be living independently, and be either a frequent (2 or more falls in the past year) or a non-faller (1 or less falls in the past year). Participants were approached by the researcher, and explained that they were being invited to participate in a research study to help understand how health promoters can improve promotional efforts for falls prevention advice. If participants met the inclusion criteria, the study and data collection process was explained, and participants were asked to read a letter of information and complete a consent form. Ethics approval for this study was obtained from the University of Western Ontario Research Board for Health Sciences Research Involving Human Subjects.

It was explained that participation was completely voluntary, and that they could refuse to participate, refuse to answer any questions or withdraw from the study at any time with no penalty or effect on their well-being. Because audio recordings were required for data analysis, participants were assured of their confidentiality, and were asked to respect the confidentiality of others.

The total sample size of the study was 35 participants, consisting of five frequent falling males ($n= 5$), seven frequent falling females ($n= 7$), nine non-falling males ($n= 9$), and fourteen non-falling females ($n= 14$). The mean age of participants was 79.73 years, with frequent falling males at 80.8, frequent falling females at 77, non-falling males at 79.44, and non-falling females at 81.68 years of age. Frequent fallers were classified as individuals with two or more falls in the past year, and non-fallers were those who had experienced one or less falls. See Table 7.0 for a complete list of descriptive statistics.

Table 7.0: Descriptive Statistics

Frequent Falling Males	Frequent Falling Females	Non-Falling Males	Non-Falling Females
<i>n = 5</i>	<i>n = 7</i>	<i>n = 9</i>	<i>n = 14</i>
<i>Mean age: 80.8</i>	<i>Mean age: 77</i>	<i>Mean age: 79.44</i>	<i>Mean Age: 81.68</i>
<i># of falls: 38</i>	<i># of falls: 29</i>	<i># of falls: 4</i>	<i># of falls: 2</i>
<i>N = 35</i>			
<i>Mean Age (N) = 79.73</i>			

Discussion Guide

The discussion guide (Appendix A) for the present study was developed in a collaborative effort by members of the research team. The questionnaire was designed to gain a better understanding of participants' perceptions of falls, motivation for

participation, how programs could be made more appealing, how the target market could be reached, and what key words, tones, and visual effects could be used in the development of promotional messages.

Procedures

Three retirement communities and one active living center were contacted and agreed to participate in the present study. Meetings with administrative personnel were held to explain the nature of the study. All focus group sessions took place at the retirement communities during times that were most convenient for participants. Prior to focus group sessions, participants were reminded of their confidentiality, and asked to respect the confidentiality of others. Letters of information were issued, the nature of the study explained, and consent obtained. All sessions were conducted in a manner that allowed for an open flow of discussion amongst the participants. A total of twelve focus group sessions were held with an average time length of 36.5 minutes. The shortest focus group session lasted 26:27, and the longest 45:59. See Appendix B for detailed information regarding focus group times, participant ages, and number of falls.

Data Analysis

Content and thematic analyses were used to determine common categories and themes among participants. Content analysis was used to answer the questions outlined in the social marketing process to understand how to market falls prevention (Kotler, 2008). Because such large chunks of discussion can contain conflicting statements, all material was subjected to more detailed coding (line-by-line) to help discriminate between differences in points of view (Kidd & Parshall, 2000). Categories and themes were developed based on discussions and answers from focus group sessions, and organized based on segment similarities and differences. Data were analyzed and coded by two members of the research team. Discrepancies were discussed and an agreement reached.

Chapter 4

4 Step 5: Identify alternative behaviours, target market barriers and motivators

4.1 Focus Group Participants

There was a total of 73 self reported falls among the entire sample size, with frequent falling males reporting 38 falls, frequent falling females 29, non-falling males 9, and non-falling females 2. Some of the frequent fallers could not remember how many falls they had experienced but confirmed that they had in fact experienced numerous falls. See Appendix B for detailed information regarding focus groups time lengths, participant ages, and number of falls.

4.2 Similarities across segments

Current prevention strategies

Exercise was by far the most commonly discussed fall prevention strategy and was mentioned by all four segments. Walking, aqua fit, resistance, cardiovascular, and balance training (ie. Yoga) were all a part of many participants' routines.

“I’ve always felt the urge to exercise. I’ve always had like a, a get going kind of an urge, like an impulse to exercise. I want to run and stuff like that you know. If I wasn’t running I was walking and that kind of stuff. So I don’t understand why people don’t want to exercise.” [laughter].

The use of *assistive devices* was another common prevention strategy across all four segments. They understood their benefits and were happy to use them when appropriate.

“Yeah, if you’ve got that to lean on. Yeah. Oh yeah, that’s almost like a caretaker.”

“A lot of people now have walkers. Maybe years ago they didn’t have those, and they needed those, you know. But now walkers make you pretty steady too.”

“Cause uhh like, I use mine in my room all the time! Even to go to the bathroom I take my walker with me.”

Suggested reasons others may not exercise

All four segments suggested that *inherent attitudes* such as laziness and stubbornness were reasons for lack of participation. Some people were thought to be naturally task oriented and enjoyed taking on new challenges, whereas others were thought to be lazy, stuck in their ways, and did not possess the drive nor the will to change behaviours.

“People don’t want to do this. I don’t think that they actively don’t want to do it, I think they’re maybe just lazy about it.”

“I have sisters and brothers, like I was just tellin’ ya, they just say they *can’t* do it and they...” “They don’t even try! I got a sister and brother in law that take the truck out to the mailbox to get the mail! Like they wouldn’t walk that far. It’s from here to the parking lot!”

“They keep hoping that they’re going to get better. And you’ve got to realize that you’re never going to get better. But there must be something that we can do to help.” “They’re hoping that they’ll get better.”

“They’re always hoping that it’s something that’s going to pass.”

Another common theme participants attributed to low participation rates was *lack of awareness*. Participants discussed how they felt that many people did not understand the benefits associated with such programs.

“They don’t understand what this exercise means.”

“They haven’t been exposed to much as far as education goes for well being.”

“They don’t think that they really fully believe, and are fully aware of the fact that you have to exercise. I don’t think they would understand that.”

Strategies to Increase Participation

Participants believed that promoting the *social benefits* associated with programs may help motivate people to participate. They talked about how it was important to get people to get out and socialize with others, and that people may be attracted to opportunities for social interaction.

“The social aspect I think is, is an incentive for people to come on a regular basis.”

“Yeah, now doing it at home, I mean there you don’t have that impetus.”

“Yeah. And I think with more people to talk to, more people to see. And I think it makes it better in a way.”

“It’s like... It’s not the exercise that you get. On a Tuesday it’s actually fairly slow you know and that. It’s the coffee afterwards that’s really good.” (laughing).

“Yeah it is! It’s the socialization.”

“Well I think one of the things that motivates people is uh... if you get people to work together at it as a group! Uh.. then you know, it’s much more interesting to do something like that when you’re with someone else.”

“Socializing! Its a matter... a means... socializing is a means of getting people to participate!”

Message delivery

The underlying theme considered to be the most important factor to increase participation was that programs must be promoted as being *fun*. Whether through social benefits or enjoyment of the activity itself, fun was mentioned as being the most important factor for participation in programs.

“I think you have to push that it’s gotta be fun! To move around and get exercise. Got to be fun! Otherwise nobody’s gonna bother.”

“Just fun! Just go out and have fun!”

“Well you have a picture of somebody dancing. People dancing. Kicking up there heals! And having a good time! Fun!”

“We have fun with it. Nobody says you got to do this, this, and this. Like you know if I don’t feel like doing what everyone else is doing I do something else. Nobody cares.”

Participants also believed that listing the *benefits* associated with exercise might be a way to educate people.

“Programs that could change their mind, or programs that they could show them what good... benefits for them.”

“You could say ‘have you tried this zumba?’ It can help you prevent falls. It can help you. Well you have to put what it can help you do.”

Pictures and or cartoons were thought to be the most effective way to get peoples' attention. Specifically, they suggested that this would allow for the message to be processed quickly without straining eyesight on too much reading.

“But you need a cartoon and a picture!”

“Pictures... Or not pictures, but uh, drawings.”

“Cartoon would be better.”

“Yeah. Comics.”

“Because, because it's compact. Well... you know it's there... and the message is there.. and you don't have to... go line by line by line...”

Communication channels

It was suggested that the most efficient way to get messages across to the general public was via television and radio. This would allow seniors to listen and watch the advertisement rather than have to do extensive reading.

“Oh yeah. Here I live in a building full of seniors, so I hear their TVs. And they're not going to go to bed. You know most of them are home by 7. Run out of energy by that time. And um, they might watch 2 hours of TV, 7 to 9 but they're getting pretty tired by 9.

“And many of them will retire, or begin to retire at 9. And so why I say 7 to 8, is because everybody's just had supper, they've had their coffee or tea and they're involved!”

“Yeah everybody listens to local radio stations here.”

Participants also preferred that it be very obvious that promoters were practicing what they were selling, and be similar in age.

“My husband had a heart attack 3 weeks ago, so yesterday we went to this ‘health and heart’ program down at the ‘center’, and the nutritionist lady, you know, she’s standing there telling us, telling everybody what to do. Well she’s got rolls just coming everywhere! And I’m thinking to myself; ‘You’re a nutritionist? And you’re telling these men’. It was mostly men who had heart attacks, and they all have big belly’s, most of them. And you’re telling them that they should... slim down and not eat it? what about you!? You look huge! You know!? And my husband said that, he says; ‘Take a look at her! Who’s she to tell me!’ That is exactly how it was yesterday!”

A discussion regarding a health promotion campaign televised in the 1990’s called ‘Body Break’ was brought up in one of the focus group sessions. Participants discussed how they felt they learned a lot about health and fitness through these advertisements. They made reference to how the health promoters in the commercials were both in good health, and were similar to them in age, suggesting that if people are to sell such programs, they should be in good physical condition, as well as close in age to the target population.

“They were always out walkin’ and joggin, and not, not runnin’ like crazy. And ‘Stay Healthy’. And I used to watch and... Rrrr they’re both in good shape, they’re both gettin’ on in years. They were on for, for many years. They were on television.”

One participant however mentioned how age would not be a factor for him.

“I-I would listen to both of them myself. Young and the older one. Wouldn’t... you know. If they’re healthy people, they’re doing the right thing. Young or old or whatever suits them. You know. That’s the way I would look at it anyway.” See Table 8.0 for a complete overview of thematic similarities across all segments.

Table 8.0: Thematic similarities across all segments

Themes	Corresponding Segments
<i>Current prevention strategies</i>	
Exercise	NFF, NFM, FFF, FFM
Assistive Devices	NFF, NFM, FFF, FFM
<i>Suggested reasons others may not exercise</i>	
Inherent attitudes; laziness, stubbornness	NFF, NFM, FFF, FFM
Lack of awareness	NFF, NFM, FFF, FFM
<i>Strategies believed to increase participation</i>	
Social benefits	NFF, NFM, FFF, FFM
Educate people on the benefits	NFF, NFM, FFF, FFM
<i>Message delivery</i>	
Make it look Fun	NFF, NFM, FFF, FFM
Pictures and/or Cartoons	NFF, NFM, FFF, FFM
<i>Communication channels</i>	
Visual and auditory advertisements; TV and Radio	NFF, NFM, FFF, FFM
Promoters; knowledgeable, similar in age, successful in program	NFF, NFM, FFF, FFM
Person to person selling	NFF, NFM, FFF, FFM

Note: NFF = Non-Falling Females; NFM = Non-Falling Males; FFF = Frequent Falling Females; FFM = Frequent Falling Males

4.3 Differences among segments

Noticeable differences were observed in the data between fallers and non-fallers, as well as males and females. Results will therefore be presented in this manner. Before these

differences are discussed, it should be noted that age is often presented as a moderating variable and could serve as a future segmentation variable for falls prevention.

Frequent Fallers vs. Non-Fallers

Frequent fallers that were interviewed often had hearing impairment, disability limitations, poorer balance, poorer physical health, poorer mental health, and greater perceived risk of falling compared to non-fallers (see Table 2.0). Most of the frequent fallers who participated in falls prevention activities were younger, displayed better cognitive and physical function, and perceived their risk of falling to be lower. Those who lacked these characteristics did not participate in falls prevention as often as recommended.

Compared to non-fallers, frequent fallers and those who had experienced a recent fall were more likely to believe that *falls were not preventable* and *lacked faith* in the effectiveness of programs designed to prevent falls. Even though some of these participants were currently participating in prevention strategies, they still believed that falling was a matter of chance.

“Cause they probably believe it doesn’t work.”

“I tried it before, and it didn’t do anything for me.”

“Uh... people don’t always believe it.”

“Some people don’t believe anything!”

“Because it’s an accident! I mean I walked into my grand daughter’s house and I knew that there was a step like that around the door. I knew that! The baby was sitting over here... and just as I looked at the baby, and I stepped up the step that high... Must have stubbed my toe on it and went flying! And I mean I was in the hospital for 2 and a half weeks! I mean, how could I prevent that!?”

“You walk outside. I-I fell once before too, just uh, a few years ago. Because my knee must have gave out or whatever. When I went to turn around and close the door. How you gonna stop that? So I don’t know, maybe you got some answers.”

Frequent fallers displayed increased falls risk perception as compared to non-fallers.

“A lot of people fall because they are afraid of falling. Well, that makes them tentative. See, you have a reason of course to fear falling. They know something about themselves.”

“Well I’ll tell you, my own experience. The first time you fall heavily, you don’t want to do it again. Straight away you, tentative a little bit.”

“Uh, you become aware that you get a little bit ‘shuffly’. You don’t lift your feet up well.”

Frequent fallers referred to lack of energy as well as pain and discomfort as a reason for not wanting to get out, socialize, and exercise.

“I used to go down Friday nights when I first got here you know... I was in a lot better shape. I’d go down for Euchre uhh, for tenant Euchre Friday nights. I used to hassle, I used to... I called them the old girls and they loved it. (laughing). But anyways. But I just, you know I just don’t have the energy level for that anymore.”

“Sometimes.... sometimes it causes pain, exercise.”

Frequent fallers also believed that they had lost much of their independence, and did not believe it was easy to regain it. “Don’t have much independence.” “Well I can’t put my

socks on.” “I got a bad arm too!” “I got more trouble putting socks on with one hand. I can’t open the top of the socks.” “Everybody likes independence!”

Non-fallers, on the other hand, believed that *falling was preventable*, and that there were ways to help reduce the risk. Non-falling participants were also less likely to perceive personal risk of falling.

“I think so. Strengthen your... your uh... body. You’re less likely to fall.”

“Oh! He’s right. They uh... he uh... if uh... if they do... if they took the exercise.. they uh... they would uh.. have less chance of falling.”

“Walk slow. Watch in front of ya. Look around. Don’t be quick.”

“Be aware of your surroundings. You know.”

“I don’t feel a risk, cause I don’t fall so therefore there’s, in my mind, no risk.”

Since frequent fallers were skeptical of the benefits of falls prevention activities, they suggested having programs advertised via *success stories* in order to legitimize their value. Promoters in advertisements should act as *program champions*, and were recommended to be similar in age, and have experienced the benefits associated with falls prevention such as improved quality of life and a reduced number of falls.

“I think that a senior should be the one doing the ad. Right, people will pay attention then. Because you know they’re not just seeing another young face, because they won’t believe... They know young people aren’t likely to fall. Or if they fall they’re not going to hurt themselves. Right, so the seniors should actually be doing the ad.”

“Well hopefully amongst all of the people with Parkinson’s there’s one person... that’s all that’s needed to get started! And, uh, it would give us some hope too... And I’m sure there’s one person that is a little better at expressing their feelings and use some help from other people who aren’t free enough to start things rolling.”

“Maybe you can get some people that it has worked for.”

“Well, you need somebody that’s done well at it, and explain it to that person. Let them know how it works. How good it is.”

“I think if you get people to, like ‘name’, to tell his story, what is it like at the, at the onset, and when he’s done too, and what he can do now. You know like that is convincing to a guy like me.”

“I think I’d be more inclined to accept his word than yours (referring to another participant as opposed to the younger moderator). Yeah... having, having gone through it. So, you could relate what’s in a book, you know tell us what we should be doing, but it’s more convincing for me to have somebody that I can believe and say... not that I wouldn’t believe you.”

Non-fallers suggested that providing and promoting more *choice* in programs, and providing *accessible locations* may help motivate people to participate. As seen in Table 2.0, many of the non-fallers were in better general health than frequent fallers and presented fewer limiting factors. These participants had more independence and therefore would be able to participate in more programs at different locations. Age was, however, a modifying factor with this segment since younger participants were also likely to be in better general health. For example, some younger frequent falling females with less severe limitations would be able to choose from a wider variety of options than older frequent fallers because of deteriorating factors that are accompanied with age.

“They could have a... maybe a pamphlet that lists all the things people can do when they’re in here. Not everybody does the same thing. But if you have a number of things, the people that read it would say, ‘Oh! I could do that!’ You know...? ‘I like doing this’, or ‘Oh! I wouldn’t do that!’”

“And you could pick out the ones... the people could pick out the ones they like to go to, and right away they're not even there yet. You know. And yet they would think about what they'd like to do.”

“And there's different things. Some people like this, some people like something else, and I think that takes care of the majority of people. Don't you?”

“Yeah well it's here, it costs nothing, you know and the I mean Canada is not always suitable for walking in the winter time but you can walk in the malls and stuff like that.”

“Come and see! Come and see! This is what they need to do! They need to come down to the pool and see some people having a really good time! We sing, and we you know, jump around, and we have fun. They... they've got to realize within this building, there's so much good stuff going on!”

“No. I know! And it's there and it's free! I look to use it and I have monetary... there's no monetary problem!” (laughing).

Non-fallers supported the idea of promoting youthfulness, longevity, and better appearances. It is possible that because non-fallers do not foresee as much risk as frequent fallers, that physical appearance may be a great motivator for people to exercise as opposed to preventing falls.

“If you want to exercise, and your body improves, and you look younger!”

“Feel younger!”

“You feel younger and you look younger!”

“People will say, “My! you're looking good! What did you do!?” That's right.”

“Yeah! Something like that! Younger and better!”

“My daughter told me, “Mum, you’re not gettin’ older you’re gettin’ younger!””

“Yeah! Better too! Because they would feel so much better. Because of their interest in life.”

Gender Differences

Gender based segmentation also provided many differences for the development of different marketing mixes. Table 2.0 suggests that males are less likely to visit medical practitioners, are generally more active, and report less health problems than females. The present study did not agree with these past findings. Compared to females, males in the present study were generally similar in levels of physical activity, and were not reluctant to discuss health problems. Non-falling males were often found to recommend visiting and listening to health care professionals, whereas females were reluctant to listen to messages coming from their doctors.

When asked whether they thought there were certain people in their lives that they felt might have an influence on their decisions, females replied with: “No.” ; “Mmmm. I don’t think so either.”; and “No. Definitely not.” When asked whether they would be more inclined to listen to their family doctors, they responded with, “Probably even less.” If they were to work with health care practitioners, such as physical therapists, they suggested that it was important that they displayed respect and patience towards them. A feeling of trust was important.

“I don’t think that there’s that many people in a place like this that are trained in every type of trouble that you would have. And they are sometimes kind of cruel to you. Saying, ‘You should be able to do that!’ And it’s frustrating!”

“I think that some people, the staff, could use a good talk to.”

“Cause I think sometimes people need someone that will show an interest in them. Cause there are people here where nobody really sits down and talks with, and really has a relationship with. There are lots of people like that here. So... uh..”

As compared to females, males preferred cheerful and funny tones to be used in advertisements.

“I think it could use some humor. If you could get anybody that was good at sketching. Show somebody rolling down the stairs or something stupid, or getting out of the tub.”

“You know you could also use the ridiculous to uh, try and get your point across. What is it, Thelma or some darn thing rather that I see on the jokes that come through on the computer every once in a while. And some of the ridiculous ones catch your attention more than the serious ones.”

“I remember the first night my unit was in France. We were bombarded by German aircrafts with leaflets. And it showed a Canadian soldier on the first page. When you turned it over you saw the guys on crutches and all bandaged up! Haha. Why put up with this? Why not go home!? Haha.”

“Something... somebody tripping over a pen!” (laughing).

Females on the other hand believed that a more *serious* tone would be more effective. Raising awareness about the risks associated with and the seriousness of falls was important to them.

“Why Play it soft!?”

“They wouldn’t want to (Pause). You don’t want them to be silly. Because it’s not a silly thing!”

“Well, I was going to say I’ll give you an example. In the doctor’s office, long before I lost my sight, there was a sign out that said this could happen to you. And I, I just never dreamed that it could happen to me. I mean must be more than me that would go in. But you can get this at the age of 50. You could lose. I mean I was fortunate I was in my 80’s. But you could get this at 50. So this could happen to you.”

“That’s a bit scary a bit of a scare tactic. You could also combine it with a slogan. Go out and exercise and have some fun. Take care of your body and your soul. Because if you don’t this might happen to you. They’ve got to see what can happen to them too!”

See Table 9.0 for thematic differences between genders, as well as frequent fallers and non-fallers.

Table 9.0: Differences

Segment	Themes
Frequent Fallers	<ol style="list-style-type: none"> 1. Lack of faith in effectiveness of programs 2. Lack of efficacy in ability to reduce risk 3. Greater risk perception 4. Less likely to believe falls are preventable 5. Promote success stories/Program Champions 6. Promote independence 7. Participants lack energy 8. Pain and discomfort as reason for lack of exercise
Non-fallers	<ol style="list-style-type: none"> 1. Believe that falls are preventable 2. Less risk perception 2. Promote more variety and choice in programs 3. List locations where services are offered 4. Promote youthfulness, longevity, and better appearances 5. Promote feeling good and better overall health 6. Knowledgeable healthy person as communication channel

Segment	Themes
Males	<ol style="list-style-type: none"> 1. More likely to consult with medical practitioner 2. Enjoy activities such as walking, and resistance training 3. Enjoy gym oriented exercises and settings 4. Task oriented 5. Funny, cheerful tones 6. Provide the facts using humor 7. Doctors as communication channel (non-fallers)
Females	<ol style="list-style-type: none"> 1. Less likely to consult with medical practitioner 2. Do not enjoy gym settings 3. Prefer functional activities promoted as being ‘fun’, Yoga, Zumba, dancing, and gardening 4. More self conscious about being ridiculed 5. More self conscious about incurring an injury while exercising 6. Require empathetic and trust worthy health care workers 7. Prefer more serious tones in messages

Non-Falling Females

Non-falling females tended to not enjoy typical ‘gym’ atmospheres. They preferred activities that were inherently physically active such as cleaning and gardening. If they were to participate in exercise specific activities they preferred things such walking, Yoga, Zumba, and dancing as opposed to strength training or using cardiovascular machines at a fitness center.

“Yeah. I don’t go to a gym. Well, I don’t go to a gym, but I do go to a church where women. It’s all women that go, we do exercises. We do a ball, we do an hour walking. It’s just an hour twice a week. And then floor exercises and things like that. So I sure think it helps your stamina. And I think it also helps to keep your mind active. Everything like that.”

“These activities, or going for a walk, or anything. I’d rather clean an oven than go to the gym.” (laughing).

“Well I don’t think the gym, I don’t like the gym. Where I go is just...you just exercise. There’s no machines, there’s no nothing. It’s in the bottom basement of a church.”

Non-falling females also discussed how the term ‘exercise’ could have negative connotations. “Exercise is not fun!”. “Exercise... that looks like work.”

Non-Falling Males

Non-falling males preferred more task oriented *strength programs* with specific goals in mind. Some even preferred to exercise alone.

“I’m amazed of just an aside, that you can put back muscle body. My age. I’m, I’m going to be 90 in July! No I’ve actually put... restored some muscle back! I thought I’d I’d gone forever in spite of exercising. I didn’t think exercising would put it back. And it has! Yeah! I’ve got a bicep again! [laughter] So I mean what more encouragement! You feel your clothes are a little bit more.” [laughter]

“I like walking alone.”

“I’ve always walked alone.”

As compared to females and frequent falling males, non-falling males were the only segment that truly felt doctors and health care practitioners could play a significant role in message delivery.

“And what better instructions with regards to keeping fit then talking to your doctor or some bulletins. Advertising within the doctors. People are, you got to keep people reminded that, get them, you got to get them to that first step.”

“I think as far as to uh, get people to change their attitude. I think probably their family physician has uh.. the best in road there uh... to remind the people that uh, you’re not 30 or 50 anymore, and uh, you need to take care of yourself in that way. In getting regular exercise; if they see someone getting sedentary and not doing the things they should... maintaining their health. That’s... they uh, they have a lot of influence on people! (laughing).”

Frequent Falling Females

Frequent falling females were often *self conscious* about falls prevention activities, and were worried about being made fun of. It was also suggested that there was a sense of *fear* associated with injuring one’s self, and being ridiculed during exercise programs.

“And we had one or two people like that in the whole place and it was full of people, but it was too, people that would hardly ever come out of their rooms. And I talked with them a few times, and they said, ‘Well I don’t want people to make fun of me if I can’t do that.’ You know. And that’s their reason for not doing it.”

“Maybe some people are self conscious.”

“Yeah! They’re scared if they fall, they’re gonna ‘HA HA HA’” (implying to get laughed at).

“They might be self conscious. I would think so yeah. The older people, especially ladies, they have a different concept of the world than we do. They wanna be uh...

acknowledged as first class people. They (wouldn't) wanna do anything that would reduce them from that."

"There are a lot of them. And they keep it private. They're ashamed."

Frequent Falling Males

Frequent falling males believed that balance was the most significant factor associated with falling. Messages to this segment should therefore focus on raising awareness that certain exercises can help improve one's balance.

"I think balance is one of the major problems."

"I would say a person that does not stand up upright. Mobile, perpendicularly. If they go to one side or the other then weight distribution changes. Old people don't have balance, and boom gone! (smacks his hands together to simulate falling and hitting the ground)."

"Well! But when you lose your balance, you lose your balance!" "You're God damn right! No matter what sex you are!"

"Perpendicularity is very important. And I...whenever I fell, it's because I twisted around... And my feet were still straight ahead. And I realized, "Hey stupid! Turn your feet first!" (referring to himself). And it worked."

"Yeah. When I stand, I just have to make sure that I'm up! And I'm steady, and then turn. Don't do it all in one motion."

Frequent falling males were found to be the segment that would most difficult to influence behaviour change. They felt very strongly that preventing falls was very difficult to do. A frequent falling male who was currently taking preventative action

discussed how he still felt his fall count was increasing. “I’m the opposite. I’m going this way, down hill!”

After being asked how he felt after his exercise programs, a frequent falling male replied, “No better! I think the pills make me feel worse! If feel good until I take my first dose of pills.”

Doctors and physiotherapists are not recommended as effective communication channels for this segment as there was a sense of negativity towards these health care practitioners.

“Well, you know what they’re like! The more pills they sell the better!”

“They push so many pills down my throat! It’s not even funny!”

“They say you need them! But we don’t know!”

“They make me take about 30 pills a day!”

“We don’t know what’s in the medication. But maybe some it we don’t need! We don’t know!”

“Yeah. I think the medication that they give me makes me feel sick a lot of times!”

“They got me taking too much medication.”

“Yeah. I took a bunch of pills one time from the doctor, saying they help arthritis. Nothing helps (my??) arthritis!”

When asked whether the participant has attempted to discuss these issues with his doctor, he simply replied: “Doesn’t do anything!”

See Table 10.0 for main differences and unique differences between segments.

Table 10. Main differences and unique differences among segments.

<p style="text-align: center;">Frequent Falling Males</p> <p>Before and after pictures/testimonial success stories/pre and post program results. Program champions as communication channels. Promote activities such as walking, and strength training. Some males preferred to exercise alone. Cheerful and humorous messages relating to daily experiences in senior life. Place advertisements in hospitals and doctors offices as these are places frequently visited by this segment.</p> <p>Stress that balance can be improved via special exercises*</p> <p>Raise awareness that falls <i>are</i>, in fact, preventable*</p> <p>Stress that exercise can <i>increase energy, reduce pain and discomfort, and can improve independence*</i></p>	<p style="text-align: center;">Frequent Falling Females</p> <p>Raise awareness that falls are, <i>in fact</i>, preventable. Promote that exercise can increase energy, reduce pain and discomfort, and improve independence. Avoid word 'exercise', it is viewed as 'work'. Improved independence via fun and social activities. Messages should entail serious tones that raise awareness about the risks of falling. Before and after pictures/testimonial success stories/pre and post program results. Promote the benefits. Preferred not to have messages delivered from healthcare practitioners. If message delivery is to be from health practitioners patience, empathy, and respect are of up-most importance.</p> <p>Promote a sense of comfort, and that participant's should not feel they will be ridiculed*</p> <p>Assure to them that programs are safe and will help reduce risk, rather than increase the risk of falling*</p>
<p style="text-align: center;">Non-Falling Males</p> <p>Promote variety and choice in different programs. Promote the setting of personal goals and challenge them with task oriented activities. Some males prefer to exercise alone. List locations where quality services are offered. Avoid the words 'falls' and 'falls prevention' and they do not associate with this segment. Messages should promote youthfulness, better appearances, and feeling good as opposed to facts about falling. Promote improved quality of life and general health. Messages should be cheerful and humorous. Cartoon characters and jokes relating to daily experiences in senior life.</p> <p>Doctors or people immersed in health culture as communication channels*</p> <p>Promote goal oriented activities*</p> <p>Doctors as communication channels*</p>	<p style="text-align: center;">Non-Falling Females</p> <p>Avoid the words 'falls' and 'falls prevention' as they do not associate with them. Avoid the word 'exercise'; it is viewed as 'work'. Dislike 'typical gym settings and exercises.' Promote variety and benefits of activities such as Yoga, Zumba, dancing, and gardening. List locations where quality services are offered. Messages should have a serious tone that raise awareness about the consequences if 'behaviour is not adopted'; not about risks associated with 'falls'. Promote youthfulness, better appearances, and feeling good as opposed to facts about falling Promote improved quality of life and general health Serious tones Preferred not to have messages delivered from healthcare practitioners. If message delivery is to be from health practitioners patience, empathy, and respect are of up-most importance.</p> <p>Promote activities such as Zumba, gardening, walking, and cleaning; not typical gym exercises*</p> <p>Promote healthy living; exercise looks like work*</p>

***Unique difference associated with that segment**

A list of key words recommended to be used in messages for different segments can be found in Table 11.0. Generally, messages were recommended to be inspirational and focused on staying active and raising awareness.

Table 11.0: Segment Messages

Segment	Messages	
Non-Falling Females	<i>Participants' Quotes:</i> "Keep busy!" "Get up! And Get going!" "Get out there." "Keep busy!" "Keep Going! Keep Going!" "Help people out!" "Let loose!" "Feel younger and look younger!"	<i>Research developed quotes:</i> "Retirement doesn't mean doing nothing!" "Enjoy yourself!" "Dance for your health!" "Just Dance!" "Come have fun!" "Just have fun!" "Let loose and have fun!"
Non-Falling Males	<i>Participants' Quotes:</i> "Pride comes before a fall." "I want to fell good!" "Watch your step!" "Don't need to live forever. Just live better!" "It's never too late!" "Use it or loose it!"	<i>Research developed quotes:</i> "You want your bicep back!?" "Balls bounce! You don't!" "This means you!"
Frequent Falling Females	<i>Participants' Quotes:</i> "Don't fall for it!" "Get out and do it!" "Don't wait!" "No falling zone!" "You're in control!" "Are you at risk?"	<i>Research developed quotes:</i> "Life...the motivation to stay active." "Reverse it!" "Surprise your doctor!"
Frequent Falling Males	<i>Participants' Quotes:</i> "Exercise with me!" "If you want to be healthy. Exercise!" "Hey! This will give you a better life!" "You'll enjoy things better!" "Live better!" "Live better and don't fall!" Take your time! "Don't fall! Fall on me! I will help you!"	<i>Research developed quotes:</i> "Exercise with her!" "Want to improve quality of life!?" "Hold on to your independence." "Exercise. Relax. Live the dream!"

Positioning Statements

Frequent Falling Males: "Increase balance. Improve independence. You CAN do it!"

Frequent Falling Females: "Everyone falls. You're not alone. Make the change. Do it safely."

Non-Falling Males: "Look stronger! Feel stronger! Start now!"

Non-Falling Females: "Look better! Feel better! Everyone's doing it!"

Future Segmentation Strategies

Although many of the non-falling participants had not experienced a fall within the past 12 months, some of them had experienced a fall sometime in their senior life. Both younger and older, male and female participants talked about how past falls have affected their *risk perception*. It should be noted that these past events may have contributed to personal attitude changes.

“I don’t think they believe it until something happens.”

“This is right, cause I never thought I needed it until I fell 2 or 3 times.”

“I fell three times before I got into these. I haven’t fallen since.”

“I think it has to happen to you before you open your eyes. Especially if it’s something different from your earlier life you know.”

“Well I’ll tell you, my own experience. The first time you fall heavily, you don’t want to do it again. Straight away you, tentative a little bit.”

“A lot of people fall because they are afraid of falling. Well, that makes them tentative. See. You have a reason of course to fear falling. They know something about themselves.”

“Like I’ve said, once it’s happened to you, you fall but you don’t think it will. Unless your doctor’s told you, described your condition that you have and now you have to be careful about falling, something like that and you’ve been alerted, you know?”

“I think most of us that are in here probably have all...I think most of us that are in here have already lost some of that independence because of something that’s happened and uh.. we appreciate the fact that we have to be careful.”

“I think they think they are invincible till they fall the first time. I’m very aware of falling. I have fallen so many times in my lifetime from the time I was a teenager. I mean I am very aware of it and very afraid of it. Well he just wants to know what we know and all I know is I am terrified of falling because I’ve done it so many times.”

“For me it was uh, I had a cancer diagnosis, and I had surgery and after that, uh a few months after that when somebody had mentioned about the center here. And after cancer they suggested I try and exercise as much as possible. You know, keep active. So that brought me to the center”.

In comparison, “absolute” non-fallers that were in better physical and mental condition, did not see the need for advice and were more likely to reject their personal risk of falling.

“I don’t feel a risk, cause I don’t fall so therefore there’s, in my mind, no risk.”

Age was also noted as a potential modifying variable for factors such as risk perception, risk of falling, and number of falls. Most of the older participants were very aware of the risks associated with falling, which may be one possible reason for their preventative strategies.

“I’m not sure that they recognize that risk. Uh, they, they take it for granted that they still.... nimble as they were when they were younger.”

Younger seniors were also found to use more media such email and internet websites such as facebook and twitter. This information could be useful for future marketing efforts.

“I know a lot of seniors who are because that’s how they communicate with the kids. And their into twitter. They go on there and play games because they get bored. Facebook has good games. That’s why a lot of people are on Facebook.”

“I don’t read the newspaper anymore. I mean if you want the obituaries and then that’s it. The only reason anyone orders the paper is for the obituaries. Cause us old people have a thing for the obituary column. But I mean you know you just log on to Chumdilly news on the internet and you can find that.”

Most participants believed that it was important to promote at an earlier age, before the age of 65. Instilling these habits earlier on in life will make them much easier to maintain.

“I think if people would prepare themselves years before.”

“I changed this when I was say in my 40’s or 30’s I would be different right now, today. A lot healthier.”

“I think it’d be a good idea if they start with kids. And get kids exercising more. Whether it’s structured or not.”

“You know I think, um, I mean I always assume that other people are like me. I find that as I’ve changed getting older I’ve started to develop counters to those things that were happening to me. See, new habits like I just said before. So you can do, you can do

something to help yourself. In other words, you say to yourself, I'll make sure that doesn't happen again."

Chapter 5

5 Step 6: Craft a Desired Positioning

5.1 Discussion

The findings of the present study are deemed to satisfy Kotler and Keller's (2009) criteria for successful segmentation. Segments are concluded to be *accessible*, *different*, and *actionable* with respect to the development of different marketing mixes.

There were several similarities, as well as differences among the segments. All segments in this study acknowledged exercise and the use of assistive devices as strategies used to prevent falls. These findings are supported by Aminzadeh and Edwards (1998) in their study exploring seniors' views on the use of assistive devices in falls prevention, as well as Barnett, Smith, Lord, Williams, and Baumand (2003), in their study on the effectiveness of group exercises in reducing falls. In general, promoting group activities, social interactions, and fun associated with programs was thought to help encourage participation. Similar to Beauchamp, Carron, McCutcheon, and Harper's findings (2007), participants in the present study preferred to exercise in groups of people that were similar in age.

Although Health Canada (1999) suggests that radio and television commercials are mediums of communication that may be too fast, and cause information processing problems for some seniors, this study concluded radio and television to be effective communication channels for this population. It is recommended, however, that messages be delivered at a slow pace and be accompanied with open or closed captioning.

Many of the differences found between frequent fallers and non-fallers in the present study were supported in the literature. Frequent fallers had an elevated risk perception

for falls (Hughes et al., 2008), less faith in programs, less self efficacy (Tinetti, Richman, & Powell., 1990), and were more likely to believe falls were not preventable. Frequent fallers also tended to be older, have poorer balance, poorer physical and mental health, (Anstey, Wood, Kerr, Caldwell, and Lord, 2009), lacked energy, and experienced more pain and discomfort.

Several gender differences found in the present study differed from the literature (Table 2.0). Males were found to be more likely to consult with medical practitioners, were open about discussing health related issues with others, and were similar to, if not less physically active than females. Females tended to prefer group oriented fitness (Burke, Carron, Eys., 2006), and preferred messages listing facts, with tones that were somewhat more serious. This is supported by Kim, Lehto, and Morrison (2007), who suggest that females tend to process information in a more exhaustive and interpretive manner, and rely on more sources of information before making decisions as compared to males. This analytical trait in females may explain why it is they prefer to know the facts before committing to the purchase of a product.

5.2 General Marketing Mix

Categories and themes that were common across all four segments were used to formulate a common mass marketing mix for seniors. This initial marketing mix was then used as a template to factor in differences between segments.

The present study found that using assistive devices and exercise related activities were noted as being the most attractive forms of falls prevention activities. All four segments agreed that laziness, stubbornness to change, and lack of awareness were reasons why others may not exercise. To help raise awareness, messages should educate people on the benefits associated with exercise. Messages should depict groups of seniors exercising together having fun. Specifically, emphasis should be focused on the social interactions

among the people in the ad. Advertisements should incorporate auditory components as often as possible to avoid straining eyesight with too much reading. Communicating the message via radio and television was suggested to be the easiest way to communicate with this population. Radio stations that play older genres of music is recommended, as well as on television when soap operas and talk shows are airing. Pamphlets should be available in doctors offices and in hospitals. People used in the ads should be similar in age to the target population, and be an expert in the area; experts such as doctors, physiotherapists, occupational therapists (Booth, L., Bauman, A., Owen, N., & Gore, C. J., 1997), or people who have successfully completed the program themselves should be used. See Table 8.0 for similarities across all segments.

5.3 Marketing differences among segments

The following section adds to the already existing marketing mix by allowing for different marketing strategies to be used for specific segments. Table 9.0 provides a detailed list of the differences between segments.

Frequent Fallers

Advertisements geared towards frequent fallers should attempt to make them understand that falls are preventable. Due to a lack of faith in the efficacy of programs, it is suggested to have before and after pictures and/or testimonial success stories from people who have benefited from the program in the advertisement. Since many of the frequent fallers did not believe that falls were preventable, and lacked self efficacy in the ability to reduce their risk of falling, having program champions may provide the necessary confidence for attitude change. Because frequent fallers believed that exercise demands a lot of energy and can be uncomfortable, messages should educate people how exercise can increase energy levels and reduce pain and discomfort.

As found in the present study and by others (Hughes and colleagues, 2008), frequent fallers demonstrated an elevated perception of the risk of falling and believed it was important for others to also be aware. Messages should therefore include important facts associated with programs. Similar to Hughes and colleagues (2008), the findings of the present study suggest promoting how people can help improve their independence as a way to motivate people to participate. Advertisements should be placed in doctors' offices, hospitals, and on buses. These locations were suggested by participants in the present study as places frequent fallers may visit often.

Non-Fallers

Both in the present study and in others (Hughes and colleagues, 2008), non-fallers perceive less risk associated with falling. They may, therefore, not relate to advertisements for 'falls prevention.' Advertisements designed for non-fallers should avoid information specifically relating to falls prevention, but rather improving quality of life. Promoting improved general health has been noted as being appreciated by seniors in past research (Yardley, Donovan-Hall, Francis, & Todd, 2006). Variety and choice in programs should be promoted in order to raise awareness as to what services are available. Providing a list of locations where quality services are offered will allow consumers to know how accessible programs are. Because most non-fallers tend to be in better general health, they are able to participate in a wider range of programs. Messages that promote youthfulness, longevity, better appearances, and 'feeling good', as opposed to facts about falling are recommended. Doctors or people who are immersed in the health culture are suggested as effective communication channels.

Males

Findings from the present research suggest that advertisements and messages for males should come from medical practitioners. Messages should promote activities such as

walking and strength training. Males preferred task oriented strength programs with specific goals in mind, and many of them preferred to exercise alone. Similar to findings in other research (Madden and Weinberger, 1984, in: Weinberger M., & Gulas, C. S., 1992), messages should be cheerful and humorous. Creating cartoon characters and developing jokes about daily experiences in senior life may attract their attention. Doctors, other health professionals (Cohen-Mansfield, J., Marx, M., Biddison, J R., & Guralnik J. M., 2004), or knowledgeable healthy people are recommended as communication channels.

Females

Females in the present study preferred not to receive the message from medical practitioners. If personal selling is to be done to females, the person must be very patient, caring, and respectful towards the individual. Promoting trusting relationships between client and health care provider is important for females. Messages should avoid using the word 'exercise' as it is often associated with 'work'. Rather, messages should promote activities that are different from typical gym exercises such as walking, Yoga, Zumba, dancing, and gardening. Because females noted injurious falls as a barrier to participation (Yardley & Smith, 2002), messages to this population should reassure and remind that the activity is safe if done properly, and can help prevent, rather than result in injurious falls. In addition to promoting the benefits associated with exercise (Yardley, Donovan-Hall, Francis, & Todd, 2006), messages should entail a more serious tone that raises awareness about the risks.

5.4 Analysis of the 'Northern Health' Falls Prevention Pamphlet

To highlight the value of market segmentation and the potential use of the information gained from the present research, a falls prevention pamphlet developed in British

Columbia will be critiqued. Northern Health delivers health care to over 300,000 people in over 24 hospitals, 14 long term care facilities, and many public health units across Northern British Columbia. Their vision is to promote health and provide health services for Northern and rural populations. Recognizing the risks associated with falls, Northern Health developed a falls prevention pamphlet (see Figure 2.0) to help promote the prevention of falls in seniors. The following section consists of a detailed analysis of the pamphlet, comparing its content to the findings in the present study. Prior to this analysis, it should be noted that the Northern Health falls prevention pamphlet does not appear to use market segmentation strategy, but rather a mass marketing approach to appeal to the general senior population.



Maintain your independence

Prevent slips, trips & broken hips

1 Be active

- Poor balance and weak muscles are not a normal part of aging but do increase your risk of falling.
- Exercise for strength, balance and coordination. You'll feel great.

2 Take your time

- Rushing through everyday activities can contribute to falls.
- Slow down, do one thing at a time, look where you are going and be sure you have your balance before you walk.

3 Make your home safe

- Remove things that you might trip over such as electrical cords, throw rugs, shoes and books.
- Use sturdy handrails, bathroom grab bars, non-slip bath or shower mats and well fitted shoes.
- Light your way inside and outside your home. Use night-lights at night.

4 Have regular check-ups

- Medication use can increase your chance of falling so have your doctor or pharmacist review all the medication you take.
- Have your vision and blood pressure checked regularly.



Maintain your independence

Prevent slips, trips & broken hips

1 Be active

- Poor balance and weak muscles are not a normal part of aging but do increase your risk of falling.
- Exercise for strength, balance and coordination. You'll feel great.

2 Take your time

- Rushing through everyday activities can contribute to falls.
- Slow down, do one thing at a time, look where you are going and be sure you have your balance before you walk.

3 Make your home safe

- Remove things that you might trip over such as electrical cords, throw rugs, shoes and books.
- Use sturdy handrails, bathroom grab bars, non-slip bath or shower mats and well fitted shoes.
- Light your way inside and outside your home. Use night-lights at night.

4 Have regular check-ups

- Medication use can increase your chance of falling so have your doctor or pharmacist review all the medication you take.
- Have your vision and blood pressure checked regularly.



Figure 2.0: Northern Health's 'Maintain Your Independence' Falls Prevention Pamphlet.

Frequent falling males

In analyzing the Northern Health falls prevention pamphlet (Figure 2.0), the slogan 'Maintain Your Independence', is considered to be appropriate for gaining the attention of frequent fallers. The ad is correct in providing four ways in which people can help maintain their independence. Although maintaining independence is important to frequent fallers, information regarding other program benefits such as improved energy levels, less aches and pains, and improved balance should also be provided. This allows this segment to better understand how they might be able to improve their independence.

The picture on the cover of the pamphlet is considered to be effective by having someone similar in age to the target population. Furthermore, having the woman walking

alone, may prove to identify well with males. Messages should use humor to attract attention and serious tones be avoided. The seniors in the ad are recommended, however, to be program champions who have personally experienced the benefits of balance oriented programs. Writing small testimonial success stories for each senior in the ad can help validate the legitimacy of the program, and assure frequent falling males that falls truly are preventable.

Non-falling males

The 'Northern Health' falls prevention pamphlet (Figure 2.0), is considered to be a completely ineffective advertisement for non-falling seniors. This segment does not believe that their independence is currently being compromised and do not believe they are at risk of falling. Providing them with information about how to prevent falls may not be relatable to this segment's beliefs. Rather, the pamphlet should promote improving quality of life, better appearances, longevity, and living the good life. A variety of programs should be listed within the pamphlet, along with locations where services are offered.

Again, non falling males would prefer to see people exercising alone, however, it is important that they are personally fit in appearance. The key words, 'Maintain Your Independence' may be considered to be too serious for this segment. The cover of the pamphlet should contain humor. Cartoon jokes that relate to common daily experiences by elderly men may help catch their attention. Information thereafter should include the benefits associated with the program and how setting small goals are the first steps to improving quality of life and general health.

Frequent-falling females

There are several attributes of the 'Northern Health' falls prevention pamphlet (Figure 2.0), that may prove to be effective when marketing to females. The tone of the message is serious, and provides detailed steps one can take to help maintain independence. Information regarding other program benefits such as improved energy levels, less aches and pains, and improved balance should also be provided. Messages about the risks associated with falls should also be provided for frequent falling females. It is recommended that the pamphlet not promote, "Exercise for strength, balance and coordination.", but rather group oriented activities that are promoted as being fun and social. Space on the pamphlet should be left open for a picture of a health care professional working with an elderly client to improve their quality of life. This may reinforce a sense of trust with health care professionals, and make females feel safer, and more comfortable about participating in new programs.

Non-falling females

As mentioned previously, many non falling females may perceive to be at low risk for falling, and may not believe that their independence is compromised. The pamphlet should, therefore, promote improved quality of life, better appearances, longevity, and living the good life. A variety of programs should be listed within the pamphlet, along with locations where services are offered.

The tone of the message is appropriately serious. Information should be provided on the steps people can take to improve quality of life, rather than maintain independence via falls prevention. Rather than emphasizing falls prevention, fall risk reduction should be promoted as only one of the many benefits of the program, and should be mentioned subtly. Again, it is recommended that the pamphlet promote fun, social activities that are not stereotypical gym exercises. Depicting positive relationships with health care professionals may reinforce a sense of comfort for non falling females.

Chapter 6

6 Limitations

A limitation to the present study lies in the small sample size. For example, a potential reason that frequent falling females did not prefer messages to be delivered via health care professionals (as the literature would suggest) may be because the sample is not representative of the general population. With a mean age of 79 years, another limitation to the present study is that the marketing mixes may be more representative of an older senior population. Although all participants in the present study were considered to be living independently, some of the retirement communities did provide meal services. A third limitation is the a priori segmentation strategy utilized. While segment differences were identified using this framework, it would be unwise to attempt to use the present findings as the sole basis of a falls prevention marketing strategy.

Chapter 7

7 Conclusion

7.1 Segmentation Strategy

The current study has concluded that market segmentation can be used in the marketing of falls prevention to seniors. Different groups of seniors required different marketing efforts. Although gender differences and differences based on number of falls are deemed to be adequate forms of segmentation, future studies should aim to quantify these results, as well as explore other segmentation criteria. Main differences in the present study were found in risk perception, confidence in programs, the tone in which the messages should be delivered, and whether messages should promote ‘falls prevention’ or general health.

7.2 Future Segmentation Research

The results of the present study suggest that future segmentation research should evaluate the effectiveness of age, risk perception, and injury as potential segmentation criteria for falls prevention.

Risk Perception

The biggest differences among segments were found between frequent fallers and non-fallers, specifically with respect to risk perception. Segmenting the market by people’s fall risk perception may prove to be a valuable strategy due to the inherent attitudinal differences between the groups. It is therefore recommended that future research be conducted to evaluate the effectiveness of risk perception as a segmentation criterion.

The Fall Risk Questionnaire (FRQ) is a measurement tool developed to allow seniors to self assess their personal risk of falling. It has been validated against the ‘gold standard’ of clinical risk evaluation that assesses independent predictors of falls such as history of falls, fear of falling, gait/balance, muscle weakness, incontinence, sensation and proprioception, depression, vision, and medications (Rubenstein, 2011). The FRQ could be used to create statistical clusters to segment seniors into different risk perception groups.

Age

Age also seemed to be associated with risk perception. Many of the older participants were very aware of the risks associated with falling, and understood that they were always at risk. In addition to risk perception, age was also found to be associated with different communication channels. Many of the younger senior participants also used email, facebook, and twitter.

When attempting to change health behaviours, many of the participants believed that the earlier in age habits were instilled, the easier they were to maintain. It is therefore recommended that segments be considered at ages younger than 65 years.

Neurologically related gait conditions

Participants in the present study with neurological conditions that affect balance and gait, such as Parkinson’s Disease, were found to have very different attitudes and beliefs with respect to falls prevention. These individuals understood that there was no cure for their condition, and believed that falls were an inevitable part of their lives. This begs the question as to whether promotional efforts could be tailored to meet the specific needs of this group of individuals.

With these additional segments in mind, it is clear that future research is needed to better understand the use of market segmentation in falls prevention. Future research in this area should be done in order to determine whether these, as well as other forms of segmentation criteria can be used to produce effective marketing mixes for falls prevention.

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Appendices

Appendix A: Focus group discussion guide

Hello everyone,

I would first like to thank all of you who joined us today to participate in this study. My name is Eric, and I am a Masters student at Western University. I am here today, because I am interested in hearing what you have to say with regards to falls prevention.

I would like to remind that this discussion will be audio recorded strictly for research purposes. I understand how important it is that information is kept private and confidential. With that in mind, I ask that everyone respects each other's confidentiality.

Are there any questions before we begin?

1. Can you describe the type of individual you believe is most (less) likely to fall?
2. What might be some other common demographic characteristics that might be used to describe individuals who are likely to fall? (ie. age, gender, education, income, etc).
 - a. typical male faller.
 - b. typical female faller.
 - c. age?
3. Do you think women believe they are more likely to fall, as compared to men? Or that men believe that they are more likely to fall, as compared to women?
4. What sort of physical activities do you enjoy, or spend the majority of your time doing?
5. How would you define independence?
6. Do you think people believe it is possible to reduce their risk of falling? If not, why?
7. Do you think people that are at risk of falling are *confident* that they can reduce their risk of falling? If not, why?
8. For individuals that do not participate in falls prevention activities (ie. exercise, medication reduction, in home modification, etc.), what would be the most common reasons for choosing not to do so?
9. How do you think we might be able to get people to recognize they are at risk of falling?
10. What do you think might motivate people to participate in these programs?
 - a. Emphasize increased independence?
 - b. Be able to visit with family and grand children?
 - c. Longevity?

- d. More energy?
 - e. "Feeling good!"?
 - i. If so, how would we communicate this? (ie. statistics? tell a story?)
 - ii. By what means could we potentially get this information across to people? (ie. news papers, TV, internet?, via family members? via family doctors?)
11. How do you think we can make these programs more appealing?
- a. Fun?
 - b. Interesting?
12. What are some 'key words' you think could be used in a promotional message in order to catch peoples' attention?
13. What type of 'tone' do you think people may respond best to? (ie. fun, playful, serious, scary).
14. What types of 'visual cues' do you think might work best to get people's interest? (ie. pictures, colors, big letters, etc.)
15. If we were to design a pamphlet to promote learning about one's personal risk of falling, what sort of things do you think people who are at risk of falling might want to see? (ie. messages, pictures, colors, format).

Male: _____

Female: _____

Age: _____

of falls in past 12 months: _____

Appendix B: Focus Group and Participant Descriptive Statistics

Focus Group 1: Non-Falling Females, n=5		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
97	0	
89	0	
87	0	
93	0	
82	0	
Time: 45:59		

Focus Group 2: Non-Falling Males, n=3		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
88	1	Macular degeneration; Uses electric wheel chair.
84	0	Stroke
74	0	
Time: 34:59		

Focus Group 3: Frequent Falling Males, n=2		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
67	11	Parkinson's Disease
78	5	Stroke; left arm non functional.

Focus Group 3: Frequent Falling Males, n=2
Time: 33:20

Focus Group 4: Frequent Falling Females, n=2		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
85	4	Parkinson's Disease
89	6	Parkinson's Disease
Time: 39:38		

Focus Group 5: Non-Falling Females, n=4		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
89	0	
86	0	
88	0	
77.5	0	
Time: 43:02		

Focus Group 6: 2 Frequent Falling Females; 1 Non Falling Female, n=3		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
89	4	Macular degeneration; blind in one eye.
75	2	Arthritis; Ankle problems; Hip surgeries

Focus Group 6: 2 Frequent Falling Females; 1 Non Falling Female, n=3		
65 (non faller)	0	2 knee replacements
Time: 33:31		

Focus Group 7: Non-Falling Males, n=2		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
84	1	
89	0	
Time: 33:49		

Focus Group 8: Frequent Falling Males, n=3		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
92	12	Macular degeneration
78	7	Macular degeneration; Electric wheelchair
89	3	Cane
Time: 44:18		

Focus Group 9: 2 Non-Falling Females; 1 Non Falling Male, n=3		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
73	1	
75	1	
79 (non falling male)	1	

Focus Group 9: 2 Non-Falling Females; 1 Non Falling Male, n=3
Time: 38:23

Focus Group 10: Frequent Falling Females, n=3		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
68	2	
70	2	
63	9	Joint displacement
Time: 36:07		

Focus Group 11: Non-Falling Females, n=2		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
75	0	
67	0	
Time: 30:15		

Focus Group 12: Non-Falling Males, n=3		
<i>Age</i>	<i># of falls</i>	<i>Additional information</i>
77	1	
73	0	
67	0	
Time: 26:27		

Appendix C: Letter of Information



LETTER OF INFORMATION

TITLE OF RESEARCH: Social marketing and Falls Prevention: Market Segmentation and Product Positioning.

INVESTIGATORS:

Dr. Alan Salmoni, BA, MPE, Ph.D.

Professor Ken Bowlby, MBA

Professor Colleen Sharon, MBA

Eric Stemmler, MA Candidate, University of Western Ontario

STUDY: You are being invited to participate in a research study to help understand how marketers can improve promotional efforts for falls prevention advice. If you decide to take part in this study, you will be asked to participate in a 90 minute discussion session with approximately 6 to 8 other participants. You will be asked to discuss the following topics:

- What do people think of falls prevention?
 - Why aren't people currently participating in falls prevention programs?
 - What would it take for people to participate?
 - What strategies would work to gain peoples interest from?
 - If people aren't participating in exercise programs, what are doing instead?
 - What are the real or perceived barriers to participation?
-
- What would motivate people to participate in falls prevention activities?
 - What would be the most efficient means of communication?
 - How does the term 'falls prevention' make people feel?
 - How doe the term 'improved independence' make people feel?
 - How does the term 'improved health and well-being' make people feel?

Initial: _____



BENEFITS OF PARTICIPATION: The benefits of your participation in this study may involve learning how to reduce your risk of falling, as well as the opportunity to communicate with others who may have had similar experiences with falls. Information collected in this study may help health practitioners understand how to better promote falls prevention advice, as well as how to improve participation rates.

RISKS OF PARTICIPATION: There are no anticipated risks associated with participating in this study.

VOLUNTARY PARTICIPATION: Participation in this study is completely voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no penalty or effect on your well-being.

ANONYMITY: Audio recordings are required for analyzing themes within the discussions, however all links to individuals will be removed before entering the data onto a computer for analysis.

CONFIDENTIALITY: Once data is collected, it will be locked in a cabinet in a secure office at the University of Western Ontario. No information regarding your identity will be disclosed at any point in time, and data can only be viewed by members of the research team or the Research Ethics Board at the University of Western Ontario. Access is granted to the Ethics Board so that research can be monitored. Any paper copies of the data will be destroyed once there is assurance that the data has been accurately transcribed onto a computer. All data will be destroyed after 5 years. It is important to understand that absolute confidentiality cannot be guaranteed in certain situations involving the law.

If you would like to receive a copy of the overall results of this study please advise one of the researchers. If you have any questions about this study please feel free to contact Dr. Alan Salmoni at the University of Western Ontario. If you have any questions about your rights as a research participant you may contact The Office of Research Ethics at The University of Western Ontario.

Initial: _____

Appendix D: Consent Form**CONSENT FORM**

Title of research: Social marketing and Falls Prevention: Market Segmentation and Product Positioning.

I have read the Letter of Information and Consent, have had the nature of the study explained to me, and agree to participate in this study. All questions have been answered to my satisfaction.

Name of participant: _____

Signature of participant: _____

Date: _____ Location signed: _____

Person Obtaining Consent: _____

Signature of person obtaining consent: _____

Date: _____ Location signed: _____

Initial: _____

Curriculum Vitae

Name: Eric Chabot Stemmler

Post-secondary Education and Degrees: University of Western Ontario
London, Ontario, Canada
2005–2009 B.A. Kinesiology

Western University Canada
London, Ontario, Canada
2010–2012 M.A. Kinesiology

Honours and Awards: Honor roll 2008–2012

Related Work Experience Teaching Assistant
The University of Western Ontario
2010–2012

Guest Lecturer
Research Methods and Design – Western University
Canada

Ontario Neurotrauma Foundation
Research Assistant/Consultant
Evaluation of the Kids Can Bike safety training
program