

Exercise classes for falls prevention: older men's participation and perspectives

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Submitted in partial requirements for the fulfilment of

Master of Applied Science

September 2021

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Otago Polytechnic

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Abstract

Exercise classes remain a common and recommended evidence-based intervention in falls prevention. Much of the literature supports the effectiveness of classes to reduce falls in community dwelling adults and adherence rates remain relatively high. However, estimations are that women outnumber men 3:1 in classes and reasons for this are not clear. Most studies in falls prevention have included only female participants and few have specifically reported on gender perspectives regarding class participation. This study aims to explore why there are fewer men than women attending exercise classes for falls prevention.

The literature review in Chapter 2 highlights the gap involving older men in falls prevention research and explores how underlying beliefs and values in society, such as masculinity, can influence uptake and engagement in health services. In Chapter 3, the findings from the original study, as part of this thesis, are outlined. Firstly, that men are less likely to report falls and will try to reduce their falls risk in other ways. Secondly, the men also felt that classes are mostly aimed at women, therefore would not feel comfortable attending. The main conclusion from this thesis is that exercise classes for falls prevention do not meet the needs of older men and attendance rates for men will continue to be low compared to women. It is recommended that further research be conducted with older men to develop and explore options that do work for them to reduce the risk and rate of falls amongst the older population. This thesis adds to an emerging body of literature that falls prevention programmes need to reflect a gender perspective and approach.

Acknowledgements

First and foremost, I would like to thank my wonderful friend and mentor Eileen Richardson. Eileen, your passion, and unyielding work ethic had a lasting impact on me as a health professional and now as a researcher. You posed a question to me when we were working in community falls prevention, and it has been the driving influence behind most of this study. The question was: where is the evidence?

A special thank you to Richard Humphrey who encouraged me to start on this journey and supported me through the beginnings of this thesis. Thank you also to Glenys Forsyth and Codi Ramsey for their kindness, assistance, and guidance to get this thesis over the finish line.

Thank you to my whānau. To be blessed with parents who not only support but encourage lifelong learning is truly one of the greatest gifts you can instil in your child. This is a gift I will whole heartedly pass on to my son, so thank you both. To my sisters, for their unwavering support and encouragement in life, thank you.

Last, but not least my partner Jerram. Embarking on this journey was a lot less daunting with your constant reassurance and patience. At times you probably felt more like a primary supervisor than a partner, and I can honestly say you were both for most of it. You also gave me the mental space to write a thesis and crucially kept a little person from under my feet.

Charlie, my golden boy. May you always ask questions and strive to find the answers.

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Chapter 1: Introduction

Background in falls prevention research

Prevalence of falls and fall related injuries in older adults is well known to be a serious problem (Liddle et al, 2017, WHO, 2007). Falls are one of the leading causes of accidental or unintentional injury or death for people aged over 65 (WHO, 2018). In 2020, there were 281,229 fall injuries and 35,611 serious harm incidents for people aged over 50 years from falls reported on the New Zealand falls and fractures outcome framework dashboard (ACC, 2021). Rates of falls vary amongst countries but between 20-35% of people over the age of 65 worldwide fall each year (Chang & Do, 2015; Cheng et al., 2018).

The most serious and costly consequence of a fall are hip fractures. More than 25,000 people across New Zealand and Australia fall and fracture their hip each year (ANZHFR, 2019). Although falls and fall related injuries, such as a hip fracture, mostly affect women, men are also at serious risk of adverse outcomes from a fall.

Fall related mortality disproportionately affects men (WHO, 2007). Wehren et al (2003) report that men are twice as likely to die from a fall related hip fracture, and in one study mortality rates were as high as 37.1% compared with 26.4% of women in the first 12 months following a hip fracture (Ebeling et al., 2019; Kannegaard et al., 2010).. It is therefore important that both men and women are provided with opportunities to participate in evidence-based interventions to reduce their individual falls risk.

There is a substantial evidence to support targeted exercise involving leg strengthening and balance training, in order to reduce the risk of falling and falls related injuries in older adults (Sandlund et al., 2017). Based on the most recent Cochrane review by Sherrington et al. (2019), the authors concluded ‘with high-certainty evidence’, exercise programmes reduce the rate of falls and the number of people living in the community experiencing falls. Several evidence-based falls prevention programmes have proven effective to reduce fall rates and risk of falls, however, adherence rates can vary (Nyman & Victor, 2012).

Adherence rates are strongly linked to barriers and motivators or facilitators to participation (Bunn et al., 2008) which have been explored in several studies (Bunn et al., 2008; Cavill & Foster, 2018; Yardley et al., 2007, 2008). Findings suggest there are common themes for falls prevention; exercise and physical activity engagement, perceived health status, poor self-efficacy, personal expectations, and exercise preferences. However, the specific barriers that have been identified as relevant to falls prevention are: the social stigma associated with age or a 'falls programme', fear of falling, fatalism, underestimation of risk of falling, denial of risk, as well as an unfamiliarity with falls prevention programmes or interventions (Cavill & Foster, 2018).

Group based exercise classes are an effective way to reduce the risk of falling (Sherrington et al., 2019), however, men are less likely to participate in community-based falls prevention exercise classes and programmes (Liddle et al., 2017, 2019)). Underlying reasons for this have not been well explored (Liddle et al., 2017). Women outnumber men 3:1 (Clemson et al., 2004; Liddle et al., 2017) in falls prevention interventions in spite of having similar risk factors. A study by Anderson et al. (2016) found that class instructors and coordinators reported that men felt classes were aimed at women and they would therefore be outnumbered. However, there is very little qualitative research with men to investigate their perceptions and views around their low attendance rates in classes.

A further issue relating to the overall lack of engagement from men in falls prevention exercise is that the research itself has mostly focused on women, specifically using female participants in most clinical trials and studies. The WHO (2007) states that fall prevention policies and programmes need to reflect a gender perspective. Despite this, very few studies have captured the perspectives and voices of older men. Systematic reviews by Sandlund et al, (2017) and Sherrington et al. (2019) report the mean proportion of female participants in falls studies is 76% but could be as high as 90% (Ng et al., 2019) . Therefore, questions must be asked around the soundness and reliability of applying results to both men and women if most qualitative and quantitative falls prevention studies involved only female participants.

In summary, even with the scope of evidence in falls prevention research, most quantitative and qualitative studies have largely been dominated with female

participants. This may have led to bias regarding programme design and intervention preferences from researchers and clinicians. Exercise classes for strength and balance or falls prevention is a popular evidence-based intervention. However, men engage in falls prevention exercise classes in far fewer numbers than women and underlying reasons for this are not clear. Limited studies have explored men's views on available exercise classes for falls prevention and this study aims to explore the views of men in more detail.

Research purpose and objectives

A qualitative approach was adopted for collecting data as the purpose was to gain insights from older men regarding their perspectives of exercise for falls prevention, particularly classes. The objectives of the study were to firstly, identify some of the perceived barriers in attending classes and to secondly, identify what might motivate more men to participate in classes.

Focus groups were chosen as the method to gather data as this is effective way to gather multiple views in a short timeframe. In addition, the process of group discussions can often help people explore and clarify views around topics. Further benefits from using focus groups for data collection are that people who cannot read or write will not be discriminated against. Furthermore, group discussions encourage contributions from people who perceive they have less to say (Freeman, 2006; Kitzinger, 1995). Focus groups typically involve 5 to 8 participants. Numbers can be increased if everyone has an opportunity to share their views. At least three groups are needed to compare the data across groups (Krueger & Casey, 2000). Three focus groups were used in this study with a total number of 5-10 participants in each. A semi-structured approach was used when proposing questions around topics relating to the purpose and scope of the study. These were chosen by the researcher. The focus group discussions covered a variety of topics including reporting falls, reducing falls risk, exercise and activity preferences and perception of exercise classes. Findings from the study are outlined in chapter 3.

Thesis layout

- APA (7th edition) style is consistently used throughout this thesis and is a requirement for publication in the intended journal
- Chapter 2: Literature Review is a comprehensive and critical analysis of studies related to older men and falls prevention. This was undertaken using several databases using the terms below. Literature from men's health, health promotion and falls prevention were included and several key pieces of literature are used throughout this thesis.

Keywords: fall prevention, older men, qualitative study, gender preferences, exercise

- Chapter 3: This is a manuscript of the original study as part of this thesis. It contains a detailed description of the methods, analysis and findings pertaining to the qualitative data collected for the study. This manuscript is intended for publication.
- Chapter 4: The discussion chapter explores literature outlined in Chapter 2 with relevance to the study findings from Chapter 3, particularly the influence of men's non-engagement in falls prevention interventions. It also proposes future directions to increase uptake and engagement, and research of older men in falls prevention.

Ethical and cultural considerations

Ethics approval was required and granted on 19th June 2019 by Otago Polytechnic due to the methods of data collection, see Appendix A. Information sheets were provided, and informed consent was gained from all participants, see Appendices B & C. The researcher considered cultural safety and appropriateness for this study by consulting with The Kaitohutohu Team to discuss if the study would have significance or concern for Māori, as well as, employing the guiding principles of Te Tiriti o Waitangi. Participants in the study remain anonymous and transcripts remain confidential.

Chapter 2: Literature Review

The purpose of this literature review is to discuss and explore the gap in research involving older men, specifically in relation to falls prevention and exercise intervention studies. The initial scoping review revealed an absence of men within the field of falls prevention research but also, a general scarcity of studies involving older men within health and exercise literature. This raised questions as to why men have not been included in studies or research in the same numbers as women, and how this has influenced the recommendations and interventions that are currently in place for falls prevention. Literature from men's health, health promotion, gender preferences for exercise and men's only programmes has been drawn upon to provide a wider perspective around men's engagement in exercise and/or physical activity, including health services generally.

There is a considerable research and studies in the field of falls prevention, therefore it was important to include systematic and meta-analysis reviews, in addition to recommended reading from government organisations such as, The Health and Quality Safety Commission's (HQSC) 'Reducing Harm from Falls' report (2019). The areas of men's health and gendered interventions were more limited, however, considered essential to include, as they provided a few examples of successful programmes with men only. Databases were searched using the key words below, with a date range of February 2019 to April 2021. International and governmental policies, guidelines and documents have been included along with references from identified key papers. This was to ensure a comprehensive and critical review of the literature was undertaken.

Key words: falls, falls prevention, gender, gender preferences, older men, exercise preferences, exercise classes, health promotion, men's health, older people, qualitative research, men's sheds.

Older men's health and engagement in exercise

A distinct lack of literature specifically involving older men and exercise, particularly about preferences and perspectives, was evident using the search terms above. Consequently, the search was expanded to include any studies with older men and much of that literature came from Men's Health and physical activity studies. To try to better understand older men and their engagement with exercise, it was important to understand men in the context of health and healthcare, and how this differs to women.

Men's health has been described as a 'conundrum' (Baxter et al., 2017). Most of the research to date has focussed on disease events and associated disabilities (Park & Lee, 2020) and not addressed the deteriorating health of men overall compared with women (Garfield, 2008). This is despite research and clinical trials in health science mostly involving men in terms of design, measurement, and outcomes (Garfield, 2008; Johnson et al., 2008). Globally, life expectancy and health care use are far lower in men compared with women (Garfield, 2008) yet research has neglected to examine the risks associated with the male gender specifically (Courtenay, 2000; Johnson et al., 2008). Life expectancy in New Zealand for Māori men was 73.4 years in 2017-2019 compared with 77.1 years for Māori females. For non-Māori males it is 80.9 years compared with 84.4 years for non-Māori females (Stats NZ, 2021). From a biological perspective it is assumed that men will die earlier than women, yet there is no defined cause for why women live longer than men. Despite this, it is evident that men engage in less healthy lifestyles and adopt fewer health-promoting behaviours (Courtenay; 2000, 2009). Baxter et al (2017) state that "Men's health is partly a product of biology, social expectations and systemic discrimination variable of access and quality of care, as well as a consequence of masculinity (a set of male attributes, behaviours and roles)" (p.9). More recently however, men's health is being recognised as a speciality area of health promotion and clinical practice, yet in many countries, including New Zealand, there is no specific health strategy or policy for men (Baxter et al., 2017). Garfield (2008) states that better understanding of men's health behaviours in the context of gender socialisation and masculine ideology is an important step in developing and providing effective care for men.

Gender is widely accepted to be a determinant of health. Men from similar social and cultural backgrounds will experience higher rates of mortality and disability associated with health conditions disease and injury rates (Evans et al., 2011). Research is yet to specifically explain the connection between gender roles and health outcomes. However, the discussion around the relationship between masculinity and healthcare has become more noteworthy in the literature (Charmaz, 1994; Drummond, 2003; Evans et al., 2011; Garfield, 2008; Liddle et al., 2019; Verdonk et al., 2010). The social construct of masculinity has been suggested to play a crucial role in why men engage with health services less and adopt fewer health promoting behaviours (Courtenay, 2000, 2009; Evans et al., 2011). In western society, traits such as physical strength, mental resilience, autonomy, emotional restraint, and independence are valued (Evans et al., 2011; Sims-Gould et al., 2018) and correspond with the notion 'hegemonic masculinity' (Courtenay, 2000). The influence of masculinity on individuals changes throughout the life course and intersects with other determinants such as race, education, employment, and socioeconomic status (Evans et al., 2011). Factors associated with ageing such as loss of physical and cognitive abilities, independence and autonomy are at odds with the values of hegemonic masculinity (Sims-Gould et al., 2018). To compensate, men may make efforts to preserve their masculinity by actively hiding their disabilities or not participating in health promotion activities, even when they have a chronic condition (Charmaz, 1994; Courtenay, 2000).

The health of older people continues to be an area of key focus with a global ageing population (World Health Organization, 2007). Being physically active later in life is a key component in maintaining functional capacity, as well as maintaining independence and preventing disability (World Health Organization, 2007). Older people's physical capacity is constantly being challenged to meet the demands of everyday life and the environment around them (Sims-Gould et al., 2018). Despite this, older men are less likely than older females to seek help with physical disabilities, challenges associated with daily living, substance misuse and mental health (Kosberg, 2005). In their qualitative study McKinlay et al. (2009) found that men felt that general practice and care is focussed more on women and children. Furthermore, despite men having positive beliefs about health, men were not able to describe a consistent method of seeking health support.

‘A real man is not a whiner’ was a theme that emerged from the qualitative study by Verdonk et al (2010) about health beliefs and workplace physical activity. Most of the men stated that ‘real men’ should not actively take care of themselves in terms of their health, when there is no real ‘need’ to do so, because this would show weakness. The men also did not relate exercise to their health directly but agreed that health does have an impact on their ability to exercise and participate in sport. In other words, the men did not view exercise to be important for their health, but they did identify that being unhealthy would impact on their ability to exercise for enjoyment and participation. The views of these men are likely shared by many men and could account for some of the poor participation and uptake of health promotion programmes, including exercise classes.

There were few studies regarding exercise or physical activity preferences and experiences of older men (Sims-Gould et al., 2018). In spite of men being involved in other areas of health research (Garfield, 2008; Johnson et al., 2008), exercise and physical activity literature seems to have focused on the experiences of women (Sims-Gould et al., 2018). Themes that emerged from those studies on the motivations for older people engaging in physical activity, such as social connectedness, therefore, may not reflect men’s experiences (Smith et al., 2017). Although there is a strong connection between social experiences and physical activity, a recent systematic review by Smith et al (2017) found there to be insufficient evidence to determine the association between physical activity and social support for men. This is likely to be because studies have had mostly female participants and very few men. However, in the study by Sims-Gould et al (2018) using photovoice as a method to explore older men’s experiences with their mobility and physical activity, some men found both casual and more meaningful social interactions encouraged physical activity. The authors also stated that many men stressed the importance of being alone when engaging in physical activity. The authors stated there is a clear need to consult with older men when designing programmes to ensure their relevance.

This need for programmes to be relevant to men was also supported by Bredland et al (2015) who state that, despite the compelling evidence supporting physical activity in older adults, their experiences as health professionals show that older men participate less in community exercise programmes. Their study aimed to describe the physical activities of older men as part of their daily routines. It was found

that men who had an active everyday life were overall more 'active' in terms of step-count than the men who engaged in regular physical exercise. The men who engaged in both regular physical exercise, such as walking, and everyday tasks such as household chores, gardening and childcare, were the most active overall. It is possible therefore that men, although not engaging in exercise programmes, may still be active in everyday life doing other activities. Nevertheless, being active does not directly correspond to reducing individual risk factors for disease and disability, particularly falls risk and this will be discussed later in the chapter.

The connection between the body and the ability 'to do' activities or engage in exercise is one that is explored further by Drummond (2003) in his study titled 'Retired Men, Retired Bodies'. One theme that emerged from this qualitative study was 'The Functional Body', where older men referred to their bodies as a "tool", as if the body is a machine and is more strongly associated with the construct of masculinity than femininity. Another theme to emerge was 'feelings of inadequacy' which Drummond (2003) states is, "the body cannot 'do' what it once was able to do in terms of its masculinised performance" (p.7). Even so, the men had a positive view of group physical activity as a means of socialisation and enhancing their participation through a sense of camaraderie and friendship. All the men were participating in a walking programme and had forged friendships outside of the exercise group, though the men themselves used alternative language such as 'doing exercise'. Drummond (2003) states that the notion of 'doing' physical activity was a significant factor in the development of positive masculine identities for the men.

Older men remain largely forgotten in literature and their lives are mostly unexplored (Evans et al., 2011; Kosberg, 2005; Loeb, 2004). However, some common themes have emerged from relevant men's health literature around masculinity, engagement in services and the views and preferences of men in physical activity. These highlight the need for relevant programmes and policies to be tailored to men's needs, and more specifically, older men.

Gendered interventions and health promotion programmes

As outlined previously, the lives and experiences of older men have been mostly unexplored in the literature (Evans et al., 2011; Kosberg, 2005; Loeb, 2004) and have been described as an ‘academic blind spot’ (Milligan et al., 2016). Much of the literature on Men’s Health conveys men are more likely to adopt risk taking behaviour and less likely to engage with health services (Courtenay, 2009). This poses a challenge for health promotion and health professionals (Milligan et al., 2016; White et al., 2011).

Interventions and programmes that engage men, particularly older men, in activities to promote socialisation has developed over the years. One of the most widely known of these programmes is the ‘Men’s Shed’ movement. Men’s Shed was first developed in Australia and has spread to many other countries, including New Zealand. Men’s Sheds are “community-based male-friendly spaces where men connect with other members of the community, while simultaneously providing opportunities to learn practical skills and develop interests” (Wilson & Cordlier, 2013, p. 452). Many of the activities involve woodwork or carpentry and are made for the local community, such as the popular Lilliput Library boxes which are found in many towns and cities around New Zealand. The Men’s Shed movement has been reported to have many individual benefits, such as mental wellbeing and reducing social isolation (Golding, 2011a).

Men’s Shed has also been a recent place for research into gendered interventions. A study by Milligan et al (2016) to review the evidence for the effects of Men’s Sheds and other gendered interventions found there to be qualitative data supporting the mental health and wellbeing of older men but little evidence on the physical health benefits. The authors point out that there is a lack of longitudinal data and evidence drawing on validated health and wellbeing measures. Nonetheless, a recent study by Liddle et al (2017) specifically implemented a falls prevention programme called ‘Stepping On’ with members of a Men’s Shed in Sydney, Australia. As it was a qualitative intervention study, no outcome measures for mobility or reducing risk of falling were implemented. Regardless of that fact, what strongly came through from the men was that they enjoyed the programme because the content was relevant, meaningful, and carried out in a convenient location (the shed). Liddle et al

(2017) stated that it would have been unlikely that the men would have sought out, or participated in the programme, had it not been for the shed and that the running of the programme was in partnership with the men. They initially tried some exercises which provided an opportunity to gauge the relevance of the programme in an informed way and collectively decided to run it at the shed. A sense of collaboration between the authors and participants of this study was evident. The authors also state their findings highlight the importance of using content and activities in a programme which are orientated to older men, as well as, in an environment in which they are comfortable and familiar with, including the other participants.

The preferences for exercising in gender-segregated and gender-integrated groups was examined prior to the study by Milligan et al (2016) , by Dunlop and Beauchamp (2011). They used survey data from 772 adults which showed that both males and females had a stronger preference for exercising with members of their own gender and this was accentuated for overweight participants. In a later study by Dunlop and Beauchamp (2013) called 'Birds of a Feather Stay Together', the authors report on a case study analysing a group-based exercise programme for older men called 'The Lively Lads Fitness Program' based in Canada. Specifically, the authors were interested in identifying the elements that accounted for its ongoing success in engaging older men in exercise since the 1980's. Results show most of the men credit demographic homogeneity for the success of the programme. In other words, exclusively exercising with other men. The men stressed feeling uncomfortable exercising in the company of women and that being with other older men added to a sense of camaraderie (Dunlop & Beauchamp, 2013). The men also attributed the success of the programme to the leadership from the instructors. The men valued the provision of choice and relevance of the content of the programme. Evidence-based programmes are only effective if the intended population is participating to gain the benefit for which they were developed (Nyman & Victor, 2012). .

To investigate how best to recruit and engage older men in evidence-based health promotion (EBHP) programmes, Anderson et al (2016) conducted a mixed method study using focus groups and surveys with programme coordinators and instructors from a regional health promotion network in South Florida. Data was triangulated using findings from the survey to support the ideas reported in the focus groups. Barriers to participation included such things as: men felt outnumbered by

women in programmes and classes, men were uncomfortable seeking help for and discussing health issues, men had negative perceptions of health promotion programmes and men preferred to do other activities rather than attend workshops or programmes. The authors state, overall, the results highlight several limitations to engaging men in health promotion programmes including the current format of many of those programmes which are not suited to the needs of older men. They suggest a tailored approach to marketing and recruitment as well as adapting what is currently being offered to include beliefs and preferences of older men (Anderson et al., 2016).

As described earlier, older men are not as involved in health promotion programmes and could be considered a 'hard to reach group'. Older people living in deprived areas, those aged over 85 and from black or minority ethnic (BME) groups are also considered 'hard to reach' (Liljas et al., 2019). Due to historical exploitation of older people, children, and those from BME groups, a distrust for medical research has grown amongst populations, particularly in older adults from BME groups (Herrera et al., 2010). Liljas et al (2019) gathered the views of older people from BME living in North London and the professionals working with these groups. One theme to emerge was that family and peers have an influence over health promotion actions and behaviours. This could be positive in terms of encouragement to attend programmes or engage with a health professional. On the other hand, it could be discouragement because they were needed at home for support of family members. This was corroborated by the professionals working with this group. Professionals reported sometimes family members had concerns about attendance to groups or programmes which professionals felt was linked to ageism and being overly protective. Older people from deprived areas in the study also reported a reluctance to engage in health promotion because of a lack of social support, over-exposure to negative social communication about the programme or initiative, along with poor levels of health literacy. The authors concluded that older people from BME groups and older people from deprived areas reported being reluctant to access health promotion resources and recommended investing in education and empowerment.

The similarities between older people from BME groups, older people from deprived areas and older men are useful to note in terms of what influences their engagement and perceptions of health services. Another important finding from the study by Liljas et al (2019), was how family, peers and social contacts have an

influence over older people's willingness to engage in health promotion, including exercise programmes. Negative attitudes and assumptions about programme content, target audience and marketing can influence uptake and participation. In terms of older men specifically, their own attitudes and assumptions around exercise may also have a noteworthy influence in their engagement of effective health and wellbeing interventions.

Falls prevention research and gender analysis

Falls and fall related injuries are a significant health issue for older people and can have both debilitating and isolating consequences (Chang & Do, 2015; Clemson et al., 2012; Kiami et al., 2019; Ng et al., 2019; Sandlund et al., 2017; World Health Organization, 2007).

Falls most commonly affect older women, but they also affect older men (Ebeling et al., 2019). There is little information regarding rates of falls and fractures in older men, however, men remain at risk of serious and adverse fall-related outcomes (Liddle et al., 2017; World Health Organization, 2007). In the last Global Report on Falls by WHO (2007), it was estimated up to a third of older men experience a fall each year and it is unclear if that estimation remains accurate in 2021. However, men are less likely to report falls, seek medical care and discuss falls or falls prevention with a health care provider (Sandlund et al., 2017; Stevens et al., 2012). Mortality rates following a hip fracture are higher in men and yet only account for 20-25% of all hip fractures (Ebeling et al., 2019; Ng et al., 2019; World Health Organization, 2007).

Falls prevention research has historically consisted of clinical trials and intervention studies using varying types or styles of strength and balance exercises, both in group settings and individually. Targeted exercises have also been used as a single intervention, or in conjunction with other interventions such as education, medication, and home modifications. The most successful and widely used, is The Otago Exercise Program (OEP) which was designed to prevent falls through a series of individualised, and progressive, leg strength and balance exercises combined with a walking plan (Campbell & Robertson, 2003). Variations of this programme and modified versions have been successfully used for home-based interventions and exercises are incorporated into group based falls prevention exercise classes (Gillespie et al., 2012). The key component for any falls exercise intervention is the length of time the individual is engaged in the programme and an average of 25 to 26 weeks is recommended (Health Quality and Safety Commission of New Zealand, 2019; Ng et al., 2019; Sherrington et al., 2019). Modified versions of the OEP delivered for as little as 8 weeks have also proven to be effective in improving balance in older adults (Almarzouki et al., 2020). It is worth noting that most of these studies have been with

female participants, approximately 75%, and in some studies participants were all female (Liddle et al., 2017; Sandlund et al., 2017). Nevertheless, the evidence for strength and balance exercise or training remains strong. Exercise programmes that include a moderate amount of strength and balance training are effective at reducing the risk and in some cases the rate of falling in older people (Cheng et al., 2018; Finnegan et al., 2019; Gillespie et al., 2009, 2012; Ng et al., 2019; Sherrington et al., 2019).

The most recent Cochrane review (Sherrington et al., 2019) concluded with ‘high certainty evidence’, that targeted exercise programmes reduce the rate of falls and the number of falls experienced by older people living in the community. They included 108 randomised control trials in this review from 1995 to 2017. This involved a variety of exercise interventions, such as balance, strength training, Tai chi, yoga and dance. ‘High certainty evidence’ is the highest grade awarded in Cochrane reviews and indicates that they “are very confident that the true effect lies close to that of the estimated effect” (p.19).

Be that as it may, Cochrane reviews are not without their limitations and despite being very comprehensive, may not convey the full picture. Nyman and Victor (2012) completed an augment of a previous Cochrane systematic review by Gillespie et al, (2009) into interventions for preventing falls for community-dwelling older adults. Nyman and Victor (2012) stated that older people’s participation in, and engagement with, falls prevention interventions was not examined in the review by Gillespie et al, 2009. They stated that regardless of how efficacious interventions are, they will not be effective if older people do not participate. Results suggested, on average, 7 out of 10 community-dwelling older people are likely to accept an invitation to participate in falls prevention intervention. However, adherence rates dropped from 80% engagement at the initial 2-4 month stage after beginning a program, to 50% at 12 months for individually targeted interventions such as home-based exercise. In contrast, walking and group-based interventions on average only dropped to 70%. They calculated an overall participation and engagement rate of 50.4% across all interventions at 12 months. This was the case even when consideration was given to recruitment rate, dropout rate and adherence during interventions.

In a systematic review of exercise for falls prevention in community-dwelling adults, Ng et al. (2019) summarised trial studies and participant characteristics. They

concluded that existing trials have been prone to performance and ascertain bias (bias in the recall of falls due to unreliable methods of ascertainment), which impedes implementing evidence-based research. They also recommended there be further research for interventions targeting males. They found most studies were in developed countries such as USA, Australia, and Japan and 90% of the trials had predominately female participants.

Participation rates in falls prevention and exercise programmes vary greatly (Yardley et al., 2008). Several factors have been suggested to contribute to the participation rates in falls prevention exercise programmes. One study that explored older people's views on falls prevention interventions in six European countries, found that "the main reason for non-participation was low perceived need, linked to a denial of risk of falling" (Yardley et al., 2006, p. 658). Kiami et al. (2019) found that older adults were more likely to register in a falls prevention programme if they reported one or more of these factors; a fear of falling, belief that a fall would impact on their quality of life, one or more falls in the past three months and a belief that they could reduce their falls risk by physical, environmental, or behavioural changes. The predictors for uptake of falls prevention exercise or strength and balance training are likely to differ from the predictors for uptake in general physical activity or exercise (Yardley et al., 2007). Some of these differences identified by Yardley et al. (2007) were based on the individual's motivation to engage in the falls intervention and whether the intervention aligns with their perceived self-image. Furthermore, many older adults only take up strength and balance exercises for falls prevention after they have sustained a fall.

The words 'falls prevention' may have deterred older adults from participating. Age UK developed an advice booklet in 2009 called 'Don't mention the F-Word' which outlines that older people stated they associated negative feelings and attitudes to the word 'fall' and supported the use of 'strength and balance' (Age UK). The language 'strength and balance' is now widely used around the world. The Accident Compensation Corporation's (ACC) most recent campaign is called 'Live Stronger for Longer'. Marketing for this initiative is targeted at attracting more people to engage in strength and balance exercise for falls prevention, both in groups and at home (ACC, 2021).

Finnegan et al. (2019) conducted a qualitative systematic review exploring older adult's experiences of continued participation in falls prevention exercise. One key theme that emerged titled 'identity' was unfortunately not defined by the authors, although, in this context appears to align closely with self-efficacy and personal causation. Personal causation is defined as an individual's sense of their current and future abilities (Kielhofner, 2009), and self-efficacy refers to an individual's perception of their capabilities relevant to specific situations or activities (Cheal & Clemson, 2001). The subthemes within this were that firstly, the people who already participated in falls prevention exercise did not see themselves, or identify as a 'faller', this despite having previously sustained a fall. Secondly, older people did not view themselves as 'old' despite their age and varying abilities or disabilities. The participants were aware of the associated risk of falling and older age but the idea of 'being old' was particularly rejected. A qualitative study by Jagnoor et al. (2014) in India used several focus groups with older adults around their perceptions of preventing falls as a health priority. The authors concluded that many of the participants attributed falls to old age. Also, that people are principally motivated by psychosocial benefits such as improvement in mobility, social engagement, increased confidence, and mood, over the health benefits alone. From these qualitative studies, it seems that older adults' motivations to engage in exercise are based on several factors and changes along with their personal circumstances, health and environment.

Lindgren De Groot et al. (2011) state in their qualitative study, that most of the studies around motivational factors and barriers have been conducted in relation to physical activity and not falls prevention exercises. They found that health professionals play a pivotal role in recommending exercise to encourage the uptake by older adults to attend classes or groups. The motivational factors identified from the older adults centred around their ability to maintain or improve independence, ability to move around and walk as well as overall health. One barrier identified by the group was having had previous unpleasant experiences during exercise. Unfortunately, it was not clear what these experiences were. The authors suggest this may have included older people's poor level of balance or their ability may have impacted on their engagement in previous exercise interventions in addition to environmental factors such as the weather and convenience. In another study into facilitators or motivators and barriers to enrolling in falls prevention programmes, Kiami et al. (2019) used a cross-

sectional survey with 369 participants. They found that most of the participants recognised the value in engaging in exercise for falls prevention and that those who had a fear of falling were far more likely to enrol in a class or programme. The authors also found many participants identified there were things they could do to reduce their individual falls risk. This contrasts with previous findings in a systematic review by Bunn et al. (2008) of older people's perceptions of facilitators and barriers to participation in falls prevention programmes. Barriers included fatalism, low health expectations and stigma associated with programmes targeting older people. Fatalism is referring to falls that were attributed to accident or 'bad luck'; they were not perceived as preventable. The differences found between these studies may indicate the benefit that health promotion programmes, and marketing around falls prevention have had in the last 10-15 years, as well as how older people have responded to marketing and education. However, Kiami et al. (2019) also stated that less than half of the participants knew of falls prevention programmes available in their area, therefore, there are still inconsistencies about what is known about falls prevention interventions by the people who are being targeted. In summary, marketing, and information about exercise for falls prevention, needs to be meaningful, accessible, relatable to older people and from trusted sources.

Men are less likely to participate in falls prevention interventions (Liddle et al., 2017; Stevens et al., 2012) despite evidence that strength and balance exercise can help reduce the risk and rate of falling (Cheng et al., 2018; Finnegan et al., 2019; Gillespie et al., 2012; Ng et al., 2019; Sherrington et al., 2019). Reasons for fewer men participating in falls prevention interventions, particularly group strength and balance classes, has not been widely explored in the literature (Liddle et al., 2017). Men have been underrepresented in falls prevention research (Liddle et al., 2017; Sandlund et al., 2017) as the mean proportion of men participating in falls prevention studies were between 10-24% (Ng et al., 2019; Sandlund et al., 2017). It was also noted by Sandlund et al. (2017) that the first author was female in 88% of the studies and furthermore, the mean proportion of male authors was only 20%. There is no research to date about the impact of authors being mostly female, however, it is likely that female authors bring a unique perspective on exercise for falls prevention in terms of preferences. It does, nonetheless, reflect much of the workforce in falls prevention research. This is largely

made up of allied health and nursing professionals, who are mostly female (Sandlund et al., 2017).

Not only do men feature less in falls prevention research, but in New Zealand, Māori men are almost completely absent in the literature. One bicultural study, which was imbedded within a larger population-based longitudinal study, (Lord et al., 2020; Puāwaitanga et al., 2014) reported some unique and interesting findings regarding falling in older age. The Life and Living in Advanced Age: A Cohort Study in New Zealand - Te Puāwaitanga O Ngā Tapuwae Kia Ora Tonu (LiLACS NZ) examined the trajectories of gait and cognition and their relationship with falls over five years. The study began in 2010 and included 421 Māori and 516 non-Māori over 84 years of age. The authors found that Māori men walked at a significantly slower pace than non-Māori men. In addition, being male increased falls risk for Māori despite Māori being significantly more active than non-Māori. The authors conclude that risk factors amongst ethnicities vary and more research into culturally appropriate programmes are needed.

Men report falls less (Sandlund et al., 2017; Stevens et al., 2012) , are less likely to seek health advice following a fall and have been reported to be in less need for fall prevention interventions (Sandlund et al., 2017). However, gender differences in the context of falls, has not been well explored, if at all. In a systematic review by Sandland et al. (2017) to explore underlying gender perspectives or interpretations on older people's views or preferences regarding uptake to exercise for falls prevention, few studies with gender perspectives were found. In fact, of the nine hundred and nine studies they identified for the review, only five had any gender analysis at all. The results from what gender analysis they did find, suggest that both men and women see men as less receptive to, and in less need of, fall prevention messages. They also noted that no studies considered the individual preferences of women and men, and whether these differed or would affect participation. Moreover, they did not seek the views of people who were already attending falls prevention exercise classes. Besides this, they found that the likelihood of men attending exercise groups or classes was much less than women. In another large population survey by Yardley et al. (2008) investigating older people's willingness to undertake falls prevention activities, men indicated they were far less likely to attend group sessions, undertake in-home strength and balance training, and accept home modifications.

Following the systematic review by Sandlund et al. (2017), the authors went on to do a qualitative study on the preferences and motivators in the context of falls prevention, specifically focussing on a gender perspective. In this study, multistage focus group discussions were used with 18 community-dwelling adults using a Participatory and Appreciative Action and Reflection (PAAR) method. The authors concluded that individual preferences within genders were more diverse than the differences between genders (Sandlund et al., 2018). This is surprising considering there were indications from the systematic review that there could be gender differences about views and preferences for exercise in falls prevention. A few underlying factors in the study's purpose and design could have contributed to this. Firstly, the participants in each focus group remained the same over the five months. Additionally, they were not separated into male and female groups at any time to triangulate findings found in mixed gender groups. As there is some evidence to indicate that older adults prefer exercising in groups that are composed of primarily a single gender, or gender-segregated, older adults may be more open to discussion about gender preferences if they are in the company of their own identified gender (Dunlop & Beauchamp, 2013). Furthermore, it would have been beneficial to separate the men and women to explore if the same themes emerged. Secondly, this study was part of a larger study. The authors were aiming to identify preferences and motivators to engage in falls prevention exercise to assist with developing a new falls prevention programme, but they did not identify the barriers to participating in falls prevention exercise interventions that are already available and then compare or contrast gender perspectives.

In a study by Liddle et al. (2017) men's perspectives on fall risk and fall prevention were considered. The men in this study came from two separate 'Men's Sheds' groups in Sydney, Australia. They took part in a group-based fall prevention programme called 'Stepping On.' The programme was developed by Clemson et al. (2014) and is a group-based programme targeting people over the age of 65. It aims to improve self-efficacy around falls risk and increase general everyday safety with strategies. Participants were then interviewed after completing the programme and it was established that the educational component of the programme was important for preventing future falls but also in adopting a change in lifestyle. Some themes emerged; first of all, the men identified that they 'adjusted their mindset' by adopting a more

cautious mindset of paying more attention to their behaviours to reduce their falls risk. Another theme called 'changing the ways' was identified. This referred to the men purposefully integrating strength and balance exercise into their day to day lives and acting on environmental hazards. The authors also identified that men, who were at risk of falling, were able to participate without needing to acknowledge their own falls risk or falls as a concern. They concluded that older men are responsive to group-based falls prevention programmes, but they need to be personally meaningful. The men valued and enjoyed the programme content, delivery, and convenience.

Liddle et al. (2017) demonstrated that older men need falls prevention programmes including exercises and education and can be receptive to these. It is difficult from the falls prevention literature, to not only obtain a gender perspective, but to definitively confirm that older men need a different approach to exercise. There is an indication that men would benefit from a gender approach in falls prevention exercise programmes, although more intervention studies are needed.

Summary

The World Health Organization stated in their Global Report on Falls (2007), “While falls are more common among older women than men, fall-related mortality is higher among men. Policies and programmes on falls prevention need to reflect a gender perspective” (p.13). Unfortunately, this literature review highlights that little progress has been made. Older men remain underrepresented, both in research, and as part of community falls prevention interventions.

This literature review has explored several areas of research relevant to the topic. The gap regarding older men’s involvement in falls prevention research was apparent from systematic reviews by Sandlund et al. (2017) and Ng et al. (2019). Literature from other areas, such as men’s health and health promotion, were drawn upon to show that men have been largely absent in other areas of research as well.

Studies and literature about, or concerning, men’s health has been beneficial in exploring how masculinity influences the health behaviours in men and more specifically, older men. It identified perspectives on how older men view themselves and the world around them. It has already been noted that older men remain largely forgotten in research and their lives mostly unexplored (Evans et al., 2011; Kosberg, 2005; Loeb, 2004), yet evidence suggests that men do care about their health but find it hard to engage with services (Johnson et al., 2008). Men have identified that they perceive health services mainly for women and children (McKinlay et al., 2009) therefore, combined with traditional masculine views that ‘a real man is not a whiner’ (Verdonk et al., 2010). it should not be surprising that men do not seek help when it is required. They have even gone to some lengths to hide or play down disabilities and symptoms related to chronic disease (Charmaz, 1994; Courtenay, 2000)

There is a clear gap in falls prevention research regarding older men’s views around exercise for falls prevention, but more noticeably, a lack of men involved in the studies altogether (Sandlund et al., 2017). Much of the recommendations and programme planning has been based on the views and preferences of women. It has been noted more recently that additional work needs to be done for older men, and with older men, to prevent falls and fall related injuries (Liddle et al., 2017; Ng et al., 2019; Sandlund et al., 2017; World Health Organization, 2007). Men are less likely to

participate in falls prevention interventions, specifically, groups or classes (Liddle et al., 2017; Stevens et al., 2012; Yardley et al., 2008). From some gender analysis in falls prevention studies, both men and women see women as more receptive to falls prevention messages (Sandlund et al., 2017). Few falls prevention studies have included only men, however, there is evidence that men are responsive to group-based falls prevention programmes if they are meaningful (Liddle et al., 2017) and a gendered approach to exercise (Dunlop & Beauchamp, 2011).

The Men's Shed movement provides evidence that gendered interventions can be effective for both the members and the community. Men's Shed developed with a focus on wellbeing and engagement in meaningful occupation. At the shed, male company and values are respected and appreciated (Sunderland, 2013). A focus on projects from woodwork to car restoration help improve mental wellbeing and reduce social isolation for the members (Golding, 2011), but also, the community benefits from the projects as well.

Falls prevention interventions should be accessible for both men and women, yet participation rates reflect the reported barriers for men. Therefore, a gendered approach may be beneficial. Liddle et al. (2017) successfully trialled an evidence-based falls prevention programme with members of a Men's Shed in Sydney, Australia. More falls prevention intervention studies like these are needed with older men to engage and support them with this significant and ongoing health issue.

Chapter 3: Original Article

“It’s a sissy thing”: Older men’s perspectives on exercise classes for falls prevention. A qualitative study.

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Abstract

Background: Exercise classes remain a popular evidence-based exercise intervention in falls prevention within the older population. However, it is estimated that women outnumber men 3:1 in classes, and reasons for this remain unclear. Few studies in falls prevention have specifically reported on gender perspectives, and in particular the voices of older men. The purpose of this qualitative study was to gain an understanding from older men of the barriers they face in attending classes and identify potential motivators for them to attend.

Method: Three semi-structured focus groups with 23 men aged 65-81 years old were conducted. One group included men who attended classes, and two groups included men involved in a non-exercise men’s club. The focus groups were recorded, transcribed verbatim and categorised using thematic analysis.

Findings: Overall, men are less likely to attend an exercise class for falls prevention. Mostly because they believe classes are for women and would therefore feel uncomfortable attending, even if recommended by a health professional. Men who were not attending classes also felt they were doing enough other forms of exercise. Those men who did already attend classes continued to go because of the social and physical benefits they gained from participating.

Conclusion: It is likely that exercise classes for falls prevention will continue to experience fewer numbers of men due to men's general perception of who the classes are targeting, and because they feel outnumbered by women. Numbers might increase marginally if recommended by a health professional and marketing is better targeted towards men. However, overall, many men do not find classes an attractive option to engage in. More research into exercise for falls prevention with older men is needed.

What we know about this topic (requirements for chosen journal publication):

- Despite the scope of evidence in falls prevention research, most quantitative and qualitative studies have been dominated with female participants and this may have led to bias regarding programme design and intervention preferences.
- Exercise classes for strength and balance or falls prevention is a popular evidence-based intervention. However, men engage in falls prevention exercise classes in far fewer numbers than women and the underlying reasons for this are not clear. Few papers have explored men's views on available exercise classes for falls prevention.

What this paper adds:

- Men are less likely to attend exercise classes for falls prevention than women. Many men believe that classes are aimed more towards women and they would be uncomfortable attending. Some men believe they are doing enough other forms of exercise.
- Further research is needed with men to better engage them in evidence-based interventions.

Keywords: fall prevention, older men, qualitative study, gender preferences, exercise

Introduction

Falls are one of the leading causes of accidental or unintentional injury or death in older people (WHO, 2018). Rates of falls vary amongst countries, but between 20-35% of people over the age of 65 fall each year worldwide (Chang & Do, 2015; Cheng et al., 2018). In 2020, there were 281,229 fall injuries and 35,611 serious harm incidents from falls reported on the New Zealand falls and fractures outcome framework dashboard (ACC, 2021). The most serious and costly consequence of a fall are hip fractures, with more than 25,000 people across New Zealand and Australia falling and fracturing their hip each year (ANZHFR, 2019).

Prevalence of falls and fall related injuries is widely recognised as a serious issue for women (Liddle et al 2017, WHO 2007). However, falls are still common in older men and fall related mortality disproportionately affects men (WHO, 2007). It is estimated that men account for 20-25% of all hip fractures. One study found mortality rates in men were higher at 37.1% compared with 26.4% of women in the first 12 months following a hip fracture (Ebeling et al., 2019; Kannegaard et al., 2010). In fact, Wehren et al (2003) reported that men were twice as likely to die from a hip fracture post fall. It is therefore important that both men and women are provided opportunities to participate in evidence-based interventions to reduce their individual falls risk.

Evidence shows that targeted exercise involving leg strengthening and balance training helps to reduce the risk of falling and falls related injuries in older adults (Sandlund et al., 2017), including the most serious such as fractures and death (HQSC, 2017). Based on the most recent Cochrane review by Sherrington et al. (2019), the authors concluded ‘with high-certainty evidence’, that exercise programmes reduce the rate of falls and the number of people living in the community experiencing falls. This review included 108 randomised control trials and 23,407 participants across 25 different countries. On average, participants were 76 years old, but only 23% were men.

Several evidence-based falls prevention programmes have proven effective in order to reduce fall rates and risk of falls, however, adherence rates can vary (Nyman & Victor, 2012). Group-based exercise adherence was found to be higher than individual multifactorial interventions and only reduced from a median of 82.9% after 3 months to

76% at 24 months. Multifactorial interventions included medication, nutrition, environmental adaptations, exercise, and education. Comparing this to individually targeted exercise, such as a home-based programme, initial adherence rates were high at a median of 82% at 10 weeks but significantly reduced at 12 months to 52%.

Group based exercise classes are therefore proven to be an effective way to reduce the risk of falling in older adults (Sherrington et al., 2019), however, men are less likely to participate in community-based falls prevention programmes and underlying reasons for this have not been well explored (Liddle et al., 2017). Women outnumber men 3:1 (Clemson et al., 2004; Liddle et al., 2017) in falls prevention interventions despite having similar risk factors. Adherence rates are strongly linked with barriers and motivators or facilitators to participation (Bunn et al., 2008) which are a complex mix of personal, social, and environmental factors (Cavill & Foster, 2018).

Barriers and motivators to engaging or participating in exercise for falls prevention has been explored in several studies (Bunn et al., 2008; Cavill & Foster, 2018; Yardley et al., 2007, 2008). Many of the barriers including poor self-efficacy, personal expectations and exercise preferences could be considered quite general in relation to exercise. However, the specific barriers that have been identified as relevant to falls prevention are social stigma associated with age or 'falls programme', fear of falling, fatalism, underestimation of risk of falling or denial, and an unfamiliarity with falls prevention programmes or interventions (Cavill & Foster, 2018). Furthermore, many of those barriers have not been further explored with relevance to gender.

Despite the scope of evidence, falls prevention research has also been prone to bias, which hinders the application of evidence-based interventions (Ng et al., 2019). The systematic review by Ng et al. of clinical trials for exercise for falls prevention in community-dwelling older adults, identified that 90% of the studies included female participants and strongly recommended more trials are needed that target older men. Lead researchers in those trials have also been mostly female. A systematic review by Sandlund et al. (2017) of gender perspectives on views and preferences of older people on exercise to prevent falls, found the first author was female in 88% of the studies and the mean proportion of male authors only 20%. Furthermore, the review found only five studies included any gender analysis and none of those studies included only male participants. Results show that men see themselves as less receptive to falls prevention

messages and identified women to be more a priority for the exercises (Clark et al., 2013; Sandlund et al., 2017).

The WHO (2007) states that fall prevention policies and programmes need to reflect a gender perspective, yet despite this, very few studies have captured the perspectives and voices of older men. The purpose of this study was to better understand why men are less likely to attend exercise classes for falls prevention and identify what might motivate more to attend. This will assist with recommendations on future research and intervention studies to better engage men into fall prevention programmes.

Methods

This qualitative study employed three focus groups, involving 23 older men. A qualitative approach was chosen as not only do older men remain under represented in falls prevention research, but their views and perspectives have not been widely documented (Liddle et al., 2017, 2019; Sandlund et al., 2017). Focus groups were used to draw out these views and perspectives. The groups sought to provide a rich understanding of men's lived experiences and perspectives within the context of exercise and falls prevention. Group discussion is an efficient and accessible way to explore views and attitudes of particular topics and personal relevance, whilst it also encourages participation from those who feel that they have little to contribute (Freeman, 2006; Kitzinger, 1995).

The first focus group (FG1) was with 10 men who already attend exercise classes or groups for falls prevention. They will be referred to as 'exercisers'. The second and third focus groups (FG2 & 3) were with the remaining 13 men who did not attend any exercise classes and are referred to as 'non exercisers', although many of those men still described themselves as physically active. The researcher used probing or clarifying questions when the men were unsure around certain areas or topics.

Table 1: *Example of topics and questions for focus group*

Topic	Prompt question
Exercise	What have you done over the years to stay physically active? What are you doing now in terms of exercise? Do you go to any exercise classes?
Falls	Have you fallen? Did you discuss with anyone that you had fallen? Would you consider seeing a health professional after a fall?
Falls prevention interventions	What is your perception of falls prevention classes or exercise class in general? Would it put you off going if it were mostly women attending? Has your GP or other health professional recommended you should do something to reduce your falls risk? If they did, would you be more likely to attend or engage in an intervention?

Ethics

Ethics approval was granted by the Otago Polytechnic Research Ethics Committee, and consultation with Kaitohutohu Team (Māori consultation) was undertaken to ensure the study would uphold the principles of Te Tiriti o Waitangi. Information sheets about the study were provided to all the men participating in the study and informed consent was gained.

Recruitment

Participants were recruited when the researcher was employed as a primary care prevention coordinator. The leader of one local exercise class and an instructor from another were used as ‘gatekeepers’ who assisted the researcher in accessing potential participants for the study. Gatekeepers can be seen as someone who controls access to an organisation or group (Singh & Wassenaar, 2016). The remaining men who participated were members of a local men’s group or club and had attended an education and information session about exercise and classes in the area.

Participants

A total of 23 men aged between 65-81 participated in the study. All provided written and/or verbal consent. Participants were given a pseudonym for the purpose of anonymity, and general views have been summarised.

Place of research

Focus groups were held in a local community setting convenient to the participants. Groups were facilitated by the lead researcher. Each group consisted of between 5 – 10 participants.

Analysis

A deductive approach to the analysis was adopted as the aim of the study was to specifically identify some key barriers for men to attend existing falls prevention exercise classes or programmes, and potential motivators for more men to attend. Some previously noted themes about men’s views on exercise and health promotion programmes from the literature were already known from a scoping review prior to commencing the study and the researcher expected some of these to be discussed by the men. A semi structured approach allowed for other topics to be discussed during the

focus group. Braun and Clarke (2006) state that this type of analysis tends to be driven by the researcher's interest in the topic area. This approach is more explicitly analyst driven by creating focus on specific aspects of the data rather than a rich description overall. Transcripts and fieldwork notes were read, analysed multiple times by the researcher, and categorised under two main themes with subthemes, see table 2. Quotes were used to illustrate the key themes, as well as the everyday language of the men.

Table 2: *themes and subthemes from analysis of transcripts*

	Themes	Subthemes
Barriers	Men's attitude to falls and managing falls risk	Men report falls less, often minimise impact of a fall or falls and in many cases deny they occurred. Do not consider themselves as much of a falls risk therefore in less need of falls prevention exercise interventions. Would rather take steps to avoid falling or minimise the impact than engage in a specific programme or class.
	Men's approach to exercise and physical activity.	Men feel they are doing enough other forms of exercise and enjoy other forms of activity like bowls, walking, swimming and golf. Prefer 'doing' activities over 'getting fit'.
	Perception that classes are not for men	Mostly filled with women and too few men attending. Some men would feel uncomfortable and out of place Men do not care as much about their appearance.

Motivators	Physical health and social benefits	The men who already attended classes enjoy the physical benefits and being in the company of others, women included.
	Recommended by a health professional	Many of the men attending classes were referred or recommended by a health professional. Men who did not attend classes would be more likely to attend if they were referred by their GP or other professional
Other	The importance of ‘Men’s only’ groups or clubs	<p>Most of the men stated that there are not enough opportunities for men to meet up and socialise.</p> <p>For those who were members of a men’s club, there were reported health and wellbeing benefits from just spending time together</p>

Findings

Overview

The perceptions and views about why there are fewer numbers of men in falls prevention exercise classes (barriers) aligned with some previously reported findings from literature within men's health, physical activity engagement and health promotion. The men, however, were less clear with ideas on how to engage more men in exercise classes for falls prevention (enablers/motivators) despite some already attending classes themselves. There was also one theme identified during analysis that could not be classified as a barrier or motivator but seemed important to all the men and was therefore included under 'other'. Overall, there seemed to be more perceived barriers to attending compared with motivators, which consequently will have an impact on ongoing and future uptake of men in evidence-based exercise programmes for falls prevention.

Barriers

Men's attitude to falls and managing falls risk

Falling or falls were discussed with all the men, and many from FG1 (exercisers) stated they had experienced a fall and/or they consider their individual falls risk. In contrast, FG2 and FG3, the (non-exercisers) stated they would be reluctant to report a fall to a health professional and would be more likely to deny it had occurred altogether. "They wouldn't count it because it wasn't big enough for a 'fall'" said Peter*, "I just tripped on something". These men also identified few prevention strategies other than "to be more careful" compared with the men from FG1 who stated they were much more aware of safety and their balance. A few from FG2 and FG3 said their balance was not as good as it used to be, however, only one used any strategies outside of a class to improve it. His strategy was to stand on each leg for a minute a day.

Men's approach to exercise

Many of the men felt they are doing sufficient other forms of exercise and physical activity. Exercise and generally being physically active, appeared to be important to all the men, including those not participating in an exercise class. "I like to be doing something, to keep myself active" said Ian* and from John*, "There's never a day when I don't walk". All these men felt they were 'doing enough' through everyday activities, family life and hobbies, although some were doing other forms of 'exercise'. Amongst the men from FG2 and FG3, the most popular form of exercise was walking, followed by bowls, and a few were also participating in badminton and golf. Men from FG1 stated that men are more sedentary later in life, therefore needed to make more of an effort to exercise.

Perception that classes are not for men

There was a perception amongst all the men that exercise classes were for women only. One stated "it's a sissy thing" when describing how classes are perceived by most men. Men from FG2 and FG3 also used the word 'intimidating' and 'cliquey' when discussing classes. Harry* from FG3 recently attended his first strength and balance class at the local bowls' club. He stated that when he arrived at the venue (bowls' club) he was unsure where to go for the class, so he asked for directions. "There was a group of men there, they go every morning, not exercising- yarning outside. I said, 'where's the fitness class?' they said, 'oh that's all women'. So, before I got to the door, I was being told that." This view was shared by other men from FG2 and FG3. A few went on to say that "they don't want to invade their (women's) territory" which then followed into a discussion around the men's club some belong to as being the only local group 'not to be invaded by women'. The topic of 'invasion' was raised by men in both FG2 and FG3. "If you go into a room with 99% women, and you're the only man going in, you feel like an invader and you don't want to be an invader" said Stephen*. In contrast, all the men agreed that they would go to a class if they really wanted to, therefore individual motivation appears to still play a vital role in exercise engagement. All the men reported that most of the marketing for exercise classes and falls prevention they had seen used women in the pictures and in the words. They felt that this portrayed the classes to be more aimed at women. Furthermore, it sends a message that men are in less need of falls' prevention than women. Some men also stated that the reason exercise classes appeal to women is because they are more concerned with their appearance or body aesthetics than

men. “Women do more (for their appearance), therefore they’re more likely to think about fitness” (Peter*) and “they (women) like to keep in shape” (Bill*). They did also state that the social aspect of classes is appealing to women.

Motivators

Physical health and social benefits

The men from FG1 all reported that they joined the class or group mostly for the health benefits, however, some stated they just enjoyed being in the company of others. For the men who joined for health reasons, most felt they needed to do more exercise in general or had a health event which triggered a change in their lifestyle, such as a stroke or cancer. “I joined it because I felt I wasn’t doing enough exercise, and I certainly wasn’t” said David* and ‘The heart foundation says you should exercise ...so that is the reason I am here’ from Barry*.

These men also reported many physical benefits to attending, including improved overall fitness, strength and balance. “I find it very beneficial I’ve got to say, I have got better strength and ability to move” and from another, “I find I can walk better now and further”. The targeted use of exercise the men also found beneficial was delivered by a qualified instructor. “Well, we have proper instructors, you know a proper one who knows the exercises you should be doing, the balance work and everything like that” said Bill*.

Men in all three groups also spoke about exercise in terms of ‘fitness’ and used terms such as ‘strong’, ‘fit’ and ‘active’ rather than to help with preventing falls specifically.

Recommended by a health professional

Health professionals appeared to play an important role in recommending and encouraging the men to exercise. For several of the men from FG1, the reason they joined a class was on the recommendation of their GP or other professional like a physiotherapist. Men from FG2 and FG3 also stated they would be more likely to get involved in exercise for falls prevention if their GP suggested it.

Other

The importance of 'Men's only' groups or clubs

Men enjoy and, in some cases, prefer being in the company of other men to socialise and to engage in activities. A men's only environment was also identified as a non-threatening, supportive place for health concerns to be discussed. All the men identified the importance of having time to socialise or to be with others although the men from FG1 felt there were fewer opportunities for men to 'meet up'. They stated that previously they would have played sport together or meet up at the pub. Most of the men who participate in exercise classes identified as being involved in exercise previously. This included some group activities and team sports like cricket. The men from FG2 and FG3 were all members of a local men's club. These men identified the importance of having somewhere to go and interact with men only, as well as having a sense of purpose. "You talk to other guys that have, sort of, been through similar sorts of things, and yeah, think 'well, you're not the only one that has to go through it'" said Michael*. Jonathan* stated, "Well normally men will keep quiet about what's wrong with themselves but over at 'The Shed' there, guys are actually quite free to talk about their problems".

Discussion

The focus group discussions with men, who were both already attending and not attending a falls prevention exercise class, was aimed to better understand men's perspectives of exercise for falls prevention, specifically, the barriers to attending classes or programmes. The men recognised several previously identified factors influencing non-attendance, including the fact that men are less likely to recognise falls risk and report falls and therefore are less likely to engage in specific interventions (Stevens et al., 2012). Men view group exercise as a female activity (Anderson et al., 2016) and are engaging in other forms of exercise. Moreover, some men feel uncomfortable exercising in the company of women (Dunlop & Beauchamp, 2011, 2013). There were more similarities in their views than differences regarding barriers, even though some of the men were already attending exercise classes for falls prevention, and some that were not. This implies that the findings in this study represent a wider view of older men's perspectives around falls prevention exercise classes and not just of those who do not attend them.

Stevens et al. (2012) explored how men and women differ in seeking medical care for falls and concluded that men were significantly less likely to report falls, seek medical attention and/or discuss falls prevention with a healthcare provider. The men in this study stated that they were less likely to report falls to their GP and, in some cases, they did not tell their own partners or family. However, the men from FG2 and FG3 appeared to more strongly identify with the under reporting of falls than the men who attend classes regularly. These men stated that sometimes they would outright deny a fall occurred or would minimise the seriousness by associating it with a cause, such as tripping over an object. This is consistent with the findings of Liddle et al. (2019) who found that men minimised the seriousness of the fall to themselves and others. Humour in the story telling was also used as a coping mechanism and as a way of deflecting attention from the seriousness and consequences of the fall. Liddle's study with 25 men aged between 70-93 years old who had experienced a fall, also found that most recognised their vulnerability to falling and were receptive to falls prevention interventions but only if they were deemed personally relevant.

Liddle et al. (2019) also stated that those men who did recognise their own falls risk and wanted to seek help, found the health system difficult to access. Men who do not identify as a falls risk seem less likely to engage in falls prevention education and prevention programmes (Stevens et al., 2012). Liddle et al. (2017) highlighted that men who are at risk of falling can still participate (in classes) without needing to acknowledge directly that falls are a concern. Several men in these focus groups identified that health professionals play a pivotal role in health promotion and recommending interventions such as falls prevention exercise classes.

It was evident in this study that older men recognise that exercise in general is important for their health and wellbeing, as well as staying independent in older age. Nonetheless, most of the men felt they were doing enough other forms of exercise which included gardening, household tasks, walking and bowls. Physical activities of a lower intensity are most popular with older adults. These include walking, gardening, and golf. (Chodzko-Zajko et al., 2009). Of the men who already attended strength and balance classes, some of them included walking as a form of exercise and others reported using a step counter like an electronic watch to help with keeping track of their activity levels. Interestingly, most of the men spoke about exercise in terms of 'fitness' and used terms such as 'strong', 'fit' and 'active' rather than to help with preventing falls specifically. Similar terms were found to be used by men compared with women in the focus group discussions by Sandlund et al. (2018). Women talked about their abilities to do everyday tasks or activities of daily living out of necessity, compared with men who spoke in terms of 'keeping fit'.

There was a general perception amongst the men, even those who attended classes already, that exercise classes were for women. There was a sense that it was a 'female only space' and that they might be perceived as 'invaders', meaning unwanted and unwelcome. The men who did attend said they had tried to get their friends (men also) to attend but most declined, despite encouragement and reassurance. Anderson et al. (2016) used surveys and focus groups with exercise coordinators to gain perspectives on barriers and strategies in recruiting and engaging older men in health promotion programmes. The coordinators felt that females outnumbering males in classes were a barrier to participation.

Dunlop and Beauchamp (2013) explored gender views further by identifying the elements of a gender segregated programmes' success and appeal using a qualitative-ethnographic method in gathering themes for the success of a male only exercise group called 'the lively lads fitness program' based in Canada. One theme to emerge was that men stressed being uncomfortable exercising in the company of women. They frequently reported that the gender-segregated structure of the program gave them an increased sense of camaraderie and security.

Men from FG1 stated that a home exercise programme was also not the solution and only one man from FG2 or 3 engaged in any form of exercise at home for strength and balance. Nevertheless, Liddle et al. (2017) found that seven out of the eleven men continued to do all, or at least some, of the exercises they were taught as part of the Stepping On programme. Men from two separate 'Men's Shed' groups completed the Stepping On falls prevention program developed in Australia by Clemson et al. (2014) This is a group-based programme targeting people over the age of 65. It aims to improve self-efficacy around falls risk and increase general everyday safety with strategies. The men were interviewed after completing the programme and the authors state that the educational component of the programme was not only important for preventing future falls but adopting a change in lifestyle. It was also noted that the men were selective in what actions they took part in and if they continued the exercises prescribed. Liddle et al. (2017) concluded that older men needed programme content and activities that are more closely orientated to them specifically or presented in a way that is personally meaningful.

Engaging older men in health promotion programmes is known to be a significant issue (Anderson et al., 2016). Barriers identified by instructors of health promotion programmes included women outnumbering men, conflict between male gender roles (masculinity) and the programme and preference for other activities. In the study by Anderson et al (2016) the instructors made several recommendations to get more men engaged. These included using men in the promotional marketing and utilising male community leaders or respected sportsmen to endorse it. Bredland et al. (2018) states "a male perspective appears to be forgotten when designing programmes and giving advice" (p.7).

Men's Shed and similar male friendly clubs or groups do offer a unique opportunity to engage with older men about health promotion and falls prevention. Researchers and health promoters need to adapt what is currently being offered to make it more attractive and accessible to men or develop something more tailored to their needs. It can no longer be assumed they will engage because the evidence shows it to be effective.

Limitations

The findings in this study are representative of some of the general views of older men related to exercise for falls prevention. Their cultural backgrounds, levels of education, and occupations were not recorded. Other qualitative studies around exercise preferences or perspectives have captured this data, however, this was not deemed to add further value to the findings in this study. More research is needed in this area and further studies can reflect the specific views of different groups.

At times it was difficult for the researcher to clearly distinguish between when the men were discussing general exercise or physical activity, or specifically strength and balance exercise for falls prevention, despite several clarifying or probing questions. This may have had an impact on the analysis of the data and reporting on findings.

All the men involved in the study were already participating in, or belonged to, a group in some form and this may have had an impact on their views about enjoying social interaction in a group setting as well as finding an activity that gives purpose and meaning to their day.

Future research and recommendations

More research is needed in the field of falls prevention exercise for older men. Rather than more qualitative studies, this group would benefit from further quantitative research, intervention studies and clinical trials that reflect a gender approach. This would be beneficial in making evidence-based recommendations alongside qualitative data that reflects men's views and perspectives. From this study it was clear that older men have some views and ideas on what may help engage them more, but ultimately more research is needed with them to explore this further.

Conclusion

Previous qualitative falls prevention studies have typically generalised perspectives and preferences of older people, neglecting to specifically consider the views of men. Likewise, no research has compared gender views. Overall, there is a gap in research that includes older men in falls prevention studies and evidence suggests that currently men have much lower rates of attendance in classes than women. It is likely that exercise classes for falls prevention will continue to record lower numbers of men due to men's general perception of who the classes are targeting. They also feel outnumbered by women. Recommendations from health professionals and more marketing towards men may help increase uptake. Nevertheless, many men do not find classes an attractive option, even if it would help reduce their falls risk. As a result, more research into exercise for falls prevention with older men is required, specifically intervention studies.

References

- Accident Compensation Corporation. (ACC, 2019). Falls and fractures outcome dashboard. Retrieved on March 29 2021, from <https://www.livestronger.org.nz/home/health-sector-information-and-dashboard/falls-and-fractures-outcomes-dashboard/>
- Almarzouki, R., Bains, G., Lohman, E., Bradley, B., Nelson, T., Alqabbani, S., Alonazi, A., & Daher, N. (2020). Improved balance in middle-aged adults after 8 weeks of a modified version of Otago Exercise Program: A randomized controlled trial. *PLoS ONE*, *15*(7 July). <https://doi.org/10.1371/journal.pone.0235734>
- Anderson, C., Seff, L. R., Batra, A., Bhatt, C., & Palmer, R. C. (2016). Recruiting and Engaging Older Men in Evidence-Based Health Promotion Programs: Perspectives on Barriers and Strategies. *Journal of Aging Research*, *2016*. <https://doi.org/10.1155/2016/8981435>
- Barmantloo, L. M., Olij, B. F., Erasmus, V., Smilde, D., Schoon, Y., & Polinder, S. (2020). Personal preferences of participation in fall prevention programmes: A descriptive study. *BMC Geriatrics*, *20*(1), 1–12. <https://doi.org/10.1186/s12877-020-01586-9>
- Baxter, G. D., Liu, L., Connolly, M. J., Theodore, R., Brunson, J., & Nicholson, H. (2017). Seven things you need to know about men's health. *New Zealand Medical Journal*, *130*(1463), 7–10.
- Bredland, E. L., Magnus, E., & Vik, K. (2015). Physical activity patterns in older men. *Physical and Occupational Therapy in Geriatrics*, *33*(1), 87–102. <https://doi.org/10.3109/02703181.2014.995855>
- Bredland, E. L., Söderström, S., & Vik, K. (2018). Challenges and motivators to physical activity faced by retired men when ageing: A qualitative study. *BMC Public Health*, *18*(1), 1–9. <https://doi.org/10.1186/s12889-018-5517-3>
- Bunn, F., Dickinson, A., Barnett-Page, E., Mcinnes, E., & Horton, K. (2008). A systematic review of older people's perceptions of facilitators and barriers to participation in falls-prevention interventions. *Ageing and Society*, *28*(4), 449–

472. <https://doi.org/10.1017/S0144686X07006861>

- Cavill, N. A., & Foster, C. E. M. (2018). Enablers and barriers to older people's participation in strength and balance activities: A review of reviews. *Journal of Frailty, Sarcopenia and Falls*, 03(02), 105–113. <https://doi.org/10.22540/jfsf-03-105>
- Chang, V. C., & Do, M. T. (2015). Risk factors for falls among seniors: Implications of gender. *American Journal of Epidemiology*, 181(7), 521–531. <https://doi.org/10.1093/aje/kwu268>
- Charmaz, K. (1994). Identity Dilemmas of Chronically Ill Men. *Sociological Quarterly*, 35(2), 269–288. <https://doi.org/10.1111/j.1533-8525.1994.tb00410.x>
- Cheal, B., & Clemson, L. (2001). Older people enhancing self-efficacy in fall-risk situations. *Australian Occupational Therapy Journal*, 48(2), 80–91. <https://doi.org/10.1046/j.1440-1630.2001.00250.x>
- Cheng, P., Tan, L., Ning, P., Li, L., Gao, Y., Wu, Y., Schwebel, D. C., Chu, H., Yin, H., & Hu, G. (2018). Comparative effectiveness of published interventions for elderly fall prevention: A systematic review and network meta-analysis. *International Journal of Environmental Research and Public Health*, 15(3). <https://doi.org/10.3390/ijerph15030498>
- Chodzko-Zajko, W. J., Proctor, D. N., Fiatarone Singh, M. A., Minson, C. T., Nigg, C. R., Salem, G. J., & Skinner, J. S. (2009). Exercise and physical activity for older adults. *Medicine and Science in Sports and Exercise*, 41(7), 1510–1530. <https://doi.org/10.1249/MSS.0b013e3181a0c95c>
- Clark, L., Thoreson, S., Goss, C. W., Zimmer, L. M., Marosits, M., & DiGuseppi, C. (2013). Understanding fall meaning and context in marketing balance classes to older adults. *Journal of Applied Gerontology*, 32(1), 96–119.
- Clemson, L., Fiatarone Singh, M. A., Bundy, A., Cumming, R. G., Manollaras, K., O'Loughlin, P., & Black, D. (2012). Integration of balance and strength training into daily life activity to reduce rate of falls in older people (the LiFE study): Randomised parallel trial. *BMJ (Online)*, 345(7870). <https://doi.org/10.1136/bmj.e4547>

- Courtenay, W. (2009). Theorising masculinity and men's health. In *Men's health: Body, identity and social context*.
<https://books.google.co.uk/books?hl=en&lr=&id=9hexN6JAVrYC&oi=fnd&pg=PA9&dq=health+and+place+and+masculin&ots=PzV7o1e3bZ&sig=VnCFB5Z99CMqKgxYvwpQtFSzyDk#v=onepage&q&f=false>
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's wellbeing: a theory of gender and health. *Social Science & Medicine*, 50, 1385–1401. <http://www.postpartummen.com/pdfs/SS&M.PDF>
- Drummond, M. (2003). Retired Men, Retired Bodies. *International Journal of Men's Health*, 2(3), 183–199. <https://doi.org/10.3149/jmh.0203.183>
- Dunlop, W. L., & Beauchamp, M. R. (2011). En-gendering choice: Preferences for exercising in gender-segregated and gender-integrated groups and consideration of overweight status. *International Journal of Behavioral Medicine*, 18(3), 216–220. <https://doi.org/10.1007/s12529-010-9125-6>
- Dunlop, W. L., & Beauchamp, M. R. (2013). Birds of a Feather Stay Active Together: A Case Study of an All-Male Older Adult Exercise Program. In *Journal of Aging and Physical Activity* (Vol. 21). www.JAPA-Journal.com
- Dunlop, William L., & Beauchamp, M. R. (2011). En-gendering choice: Preferences for exercising in gender-segregated and gender-integrated groups and consideration of overweight status. *International Journal of Behavioral Medicine*, 18(3), 216–220. <https://doi.org/10.1007/s12529-010-9125-6>
- Ebeling, P. R., Cicuttini, F., Scott, D., & Jones, G. (2019). Promoting mobility and healthy aging in men: a narrative review. *Osteoporosis International*, 30(10), 1911–1922. <https://doi.org/10.1007/s00198-019-05080-w>
- Evans, J., Frank, B., Oliffe, J. L., & Gregory, D. (2011). Health, Illness, Men and Masculinities (HIMM): A theoretical framework for understanding men and their health. *Journal of Men's Health*, 8(1), 7–15. <https://doi.org/10.1016/j.jomh.2010.09.227>
- Finnegan, S., Bruce, J., & Seers, K. (2019). What enables older people to continue with their falls prevention exercises A qualitative systematic review. In *BMJ Open*

- (Vol. 9, Issue 4). BMJ Publishing Group. <https://doi.org/10.1136/bmjopen-2018-026074>
- Freeman, T. (2006). “Best practice” in focus group research: Making sense of different views. *Journal of Advanced Nursing*, 56(5), 491–497.
<https://doi.org/10.1111/j.1365-2648.2006.04043.x>
- Garfield, C. (2008). A Review of Men’s Health and Masculinity. *American Journal of Lifestyle Medicine*, 2, 474–487. <https://doi.org/10.1177/1559827608323213>.The
- Gillespie, L. D., Robertson, M. C., Gillespie, W. J., Lamb, S. E., Gates, S., Cumming, R. G., & Rowe, B. H. (2009). Interventions for preventing falls in older people living in the community. In *Cochrane Database of Systematic Reviews* (Issue 2).
<https://doi.org/10.1002/14651858.CD007146.pub2>
- Gillespie, L. D., Robertson, M. C., Gillespie, W. J., Sherrington, C., Gates, S., Clemson, L. M., & Lamb, S. E. (2012). Interventions for preventing falls in older people living in the community. In *Cochrane Database of Systematic Reviews* (Vol. 2012, Issue 9). John Wiley and Sons Ltd.
<https://doi.org/10.1002/14651858.CD007146.pub3>
- Golding, B. (2011a). Older men’s wellbeing through community participation in Australia. *International Journal of Men’s Health*, 10(1), 26–44.
<https://doi.org/10.3149/jmh.1001.26>
- Golding, B. (2011b). Older men’s wellbeing through community participation in Australia. In *International Journal of Men’s Health* (Vol. 10, Issue 1, pp. 26–44).
<https://doi.org/10.3149/jmh.1001.26>
- Group, A. and N. Z. H. F. R. S. (2019). *ANZHFR Annual Report 2019*.
- Health Quality and Safety Commission of New Zealand. (2019). *Reducing harm from falls : Recommended evidence-based resources 2019 Includes systematic reviews , clinical guidelines and toolkits* (Issue April). www.hqsc.govt.nz
- Herrera, A. P., Snipes, S. A., King, D. W., Torres-Vigil, I., Goldberg, D. S., & Wenberg, A. D. (2010). Disparate inclusion of older adults in clinical trials: priorities and opportunities for policy and practice change. *American Journal of Public Health*, 100(SUPPL. 1). <https://doi.org/10.2105/AJPH.2009.162982>

- Johnson, L., Huggard, P., & Goodyear-Smith, F. (2008). Men's health and the health of the nation. *New Zealand Medical Journal*, *121*(1287), 69–76.
- Kannegaard, P. N., van der Mark, S., Eiken, P., & Abrahamsen, B. (2010). Excess mortality in men compared with women following a hip fracture. National analysis of comedication, comorbidity and survival. *Age and Ageing*, *39*(2), 203–209. <https://doi.org/10.1093/ageing/afp221>
- Kiami, S. R., Sky, R., & Goodgold, S. (2019). Facilitators and barriers to enrolling in falls prevention programming among community dwelling older adults. *Archives of Gerontology and Geriatrics*, *82*(May), 106–113. <https://doi.org/10.1016/j.archger.2019.01.006>
- Kielhofner, G. (2009). *Conceptual foundations of occupational therapy practice. (4th Ed)*. Philadelphia: F.A. Davis Company.
- Kitzinger, J. (1995). Qualitative Research: Introducing focus groups. *Bmj*, *311*(7000), 299. <https://doi.org/10.1136/bmj.311.7000.299>
- Kosberg, J. I. (2005). Meeting the needs of older men: Challenges for those in helping professions. *Journal of Sociology and Social Welfare*, *32*(1), 9–31.
- Krueger, R. A., & Casey, M. A. (2000). *Focus Groups: A Practical Guide for Applied Research - Richard A. Krueger - Google Books*. Thousand Oaks CA: Sage Publications. <https://books.google.co.nz/books?hl=en&lr=&id=8wASBAAAQBAJ&oi=fnd&pg=PP1&dq=Krueger+RA,+Casey+MA.+Focus+Groups.+A+Practical+Guide+for+Applied+Research.+Thousand+Oaks+CA:+Sage+Publications,+2000.+&ots=XfbKCw9JsR&sig=oelQ1pXAmafqh7n4ZoGGreZnP-k#v=onepage&q&f=false>
- Liddle, J. L. M., Lovarini, M., Clemson, L. M., Jang, H., Lord, S. R., Sherrington, C., & Willis, K. (2019). Masculinity and preventing falls: insights from the fall experiences of men aged 70 years and over. *Disability and Rehabilitation*, *41*(9), 1055–1062. <https://doi.org/10.1080/09638288.2017.1419381>
- Liddle, J. L. M., Lovarini, M., Clemson, L. M., Jang, H., Willis, K., Lord, S. R., & Sherrington, C. (2017). Men's perspectives on fall risk and fall prevention following participation in a group-based programme conducted at Men's Sheds,

- Australia. *Health and Social Care in the Community*, 25(3), 1118–1126.
<https://doi.org/10.1111/hsc.12412>
- Liljas, A. E. M., Walters, K., Jovicic, A., Iliffe, S., Manthorpe, J., Goodman, C., & Kharicha, K. (2019). Engaging “hard to reach” groups in health promotion: The views of older people and professionals from a qualitative study in England. *BMC Public Health*, 19(1), 1–16. <https://doi.org/10.1186/s12889-019-6911-1>
- Lindgren De Groot, G. C., Fagerström, L., Cathrine, G., & De Groot, L. (2011). Scandinavian Journal of Occupational Therapy Older adults’ motivating factors and barriers to exercise to prevent falls Older adults’ motivating factors and barriers to exercise to prevent falls. *Scandinavian Journal of Occupational Therapy*, 18, 153–160. <https://doi.org/10.3109/11038128.2010.487113>
- Lindsay Smith, G., Banting, L., Eime, R., O’Sullivan, G., & van Uffelen, J. G. Z. (2017). The association between social support and physical activity in older adults: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1), 1–21. <https://doi.org/10.1186/s12966-017-0509-8>
- Loeb, S. J. (2004). Older Men’s Health: Motivation, self-ratings, and behaviours. *Nursing Research*, 53(3), 198–206.
- Lord, S., Moyes, S., Teh, R., Port, W., Muru-Lanning, M., Bacon, C. J., Wilkinson, T., & Kerse, N. (2020). Gait, cognition and falls over 5 years, and motoric cognitive risk in New Zealand octogenarians: Te Puāwaitanga o Nga Tapuwae Kia Ora Tonu, LiLACS NZ. *BMC Geriatrics*, 20(1), 1–8. <https://doi.org/10.1186/s12877-020-1420-8>
- McKinlay, E., Kljakovic, M., & McBain, L. (2009). New Zealand men’s health care: Are we meeting the needs of men in general practice? *Journal of Primary Health Care*, 1(4), 302–310. <https://doi.org/10.1071/hc09302>
- Milligan, C., Neary, D., Payne, S., Hanratty, B., Irwin, P., & Dowrick, C. (2016). Older men and social activity: A scoping review of Men’s Sheds and other gendered interventions. *Ageing and Society*, 36(5), 895–923.
<https://doi.org/10.1017/S0144686X14001524>
- Ng, C. A. C. M., Fairhall, N., Wallbank, G., Tiedemann, A., Michaleff, Z. A., &

- Sherrington, C. (2019). Exercise for falls prevention in community-dwelling older adults: trial and participant characteristics, interventions and bias in clinical trials from a systematic review. *BMJ Open Sp Ex Med*, 5, 663.
<https://doi.org/10.1136/bmjsem-2019-000663>
- Nyman, S. R., & Victor, C. R. (2012). Older people's participation in and engagement with falls prevention interventions in community settings: An augment to the cochrane systematic review. *Age and Ageing*, 41(1), 16–23.
<https://doi.org/10.1093/ageing/afr103>
- Park, B., & Lee, Y. J. (2020). Upcoming aging society and men's health: Focus on clinical implications of exercise and lifestyle modification. *World Journal of Men's Health*, 38(1), 24–31. <https://doi.org/10.5534/wjmh.180103>
- Puāwaitanga, T., Tapuwae, O. N., & Ora, K. (2014). Falls in advanced age : Findings from LiLACS NZ. *Lilacs Nz*, 1–11.
<https://www.fmhs.auckland.ac.nz/en/faculty/lilacs.html>
- Sandlund, M., Pohl, P., Ahlgren, C., Skelton, D. A., Melander-Wikman, A., Bergvall-Kåreborn, B., & Lundin-Olsson, L. (2018). Gender perspective on older people's exercise preferences and motivators in the context of falls prevention: A qualitative study. *BioMed Research International*, 2018.
<https://doi.org/10.1155/2018/6865156>
- Sandlund, M., Skelton, D. A., Pohl, P., Ahlgren, C., Melander-Wikman, A., & Lundin-Olsson, L. (2017). Gender perspectives on views and preferences of older people on exercise to prevent falls: a systematic mixed studies review. *BMC Geriatrics*, 17(1). <https://doi.org/10.1186/s12877-017-0451-2>
- Sherrington, C., Fairhall, N. J., Wallbank, G. K., Tiedemann, A., Michaleff, Z. A., Howard, K., Clemson, L., Hopewell, S., & Lamb, S. E. (2019). Exercise for preventing falls in older people living in the community. *Cochrane Database of Systematic Reviews*, 2019(1). <https://doi.org/10.1002/14651858.CD012424.pub2>
- Sims-Gould, J., Ahn, R., Li, N., Ottoni, C. A., Mackey, D. C., & McKay, H. A. (2018). “The Social Side Is as Important as the Physical Side”: Older Men's Experiences of Physical Activity. *American Journal of Men's Health*, 12(6), 2173–2182.
<https://doi.org/10.1177/1557988318802691>

- Singh, S., & Wassenaar, D. (2016). Contextualising the role of the gatekeeper in social science research. *South African Journal of Bioethics and Law*, 9(1), 42.
<https://doi.org/10.7196/sajbl.2016.v9i1.465>
- Stevens, J. A., Ballesteros, M. F., Mack, K. A., Rudd, R. A., DeCaro, E., & Adler, G. (2012). Gender differences in seeking care for falls in the aged medicare population. *American Journal of Preventive Medicine*, 43(1), 59–62.
<https://doi.org/10.1016/j.amepre.2012.03.008>
- Sunderland, J. (2013). *The Taieri Blokes Shed : An Ethnographic Study* (Issue September).
- Verdonk, P., Seesing, H., & De Rijk, A. (2010). Doing masculinity, not doing health? a qualitative study among dutch male employees about health beliefs and workplace physical activity. ¿Hacer masculinidad, no hacer salud? un estudio cualitativo entre empleados varones holandeses sobre creencias de sal. *BMC Public Health*, 10, 1–14.
- Wehren, L. E., Hawkes, W. G., Orwig, D. L., Hebel, J. R., Zimmerman, S. I., & Magaziner, J. (2003). Gender Differences in Mortality After Hip Fracture: The Role of Infection*. In *J Bone Miner Res* (Vol. 18).
- White, A., Sousa, B. De, Visser, R. De, Hogston, R., Madsen, S. A., Mckee, M., Raine, G., Richardson, N., Clarke, N., & Zaton, W. (2011). Men ' s health in Europe. *International Journal of Men ' s Health*, 8(3), 192–201.
- Wilson, N. J., & Cordlier, R. (2013). *Review A narrative review of Men ' s Sheds literature : reducing social isolation and promoting men ' s health and well-being*. 21, 451–463. <https://doi.org/10.1111/hsc.12019>
- World Health Organization. (2007). WHO Global Report on Falls Prevention in Older Age. *Community Health*, 53.
http://www.who.int/ageing/publications/Falls_prevention7March.pdf
- Yardley, L., Donovan-Hall, M., Francis, K., & Todd, C. (2006). Older people's views of advice about falls prevention: A qualitative study. *Health Education Research*, 21(4), 508–517. <https://doi.org/10.1093/her/cyh077>
- Yardley, Lucy, Donovan-Hall, M., Francis, K., & Todd, C. (2007). Attitudes and

beliefs that predict older people's intention to undertake strength and balance training. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, 62(2). <https://doi.org/10.1093/geronb/62.2.P119>

Yardley, Lucy, Kirby, S., Ben-Shlomo, Y., Gilbert, R., Whitehead, S., & Todd, C. (2008). How likely are older people to take up different falls prevention activities? *Preventive Medicine*, 47(5), 554–558. <https://doi.org/10.1016/j.ypmed.2008.09.001>

Chapter 4: Discussion

The study outlined in Chapter 3 highlighted how older men view current falls prevention exercise classes and identified some of the barriers for engagement. It also identified what motivates some older men to participate in groups in a more general sense and the types of activities they enjoy. By drawing on other studies, and applying some recommendations from men's health, health promotion and falls prevention research, indications are that men would benefit from a different approach to exercise for falls prevention than what is currently being offered.

This chapter will further explore points raised in findings and discussion sections in the manuscript chapter as well as drawing on the studies cited in the literature review. The main findings from the study were that the views of men regarding falls and falls risk, exercise and classes are different to women. This discussion will begin with a focus on the men's views and behaviours regarding falls and exercise. It will then continue discussing the men's views and perceptions of current falls programmes, classes and interventions, including how to overcome barriers to participation. The discussion will conclude with the strengths and limitations to this study, together with recommendations for future research into gender-based exercise interventions for falls prevention.

The views and behaviours of men are different to women.

The views and behaviours of men on falls, managing falls risk and exercise for falls prevention are different to women. From the discussions with men who attend classes for falls prevention and those who do not, it was clear that their views on health, falls and exercise are consistent with some previous findings in the literature. It is apparent that men are less likely to seek support for health issues (Johnson et al., 2008), report falls and seek advice following a fall (Stevens et al., 2012) . They prefer to be active with everyday activities over ‘exercising’(Bredland et al., 2018) and state that women outnumbering men in classes is seen as a barrier (Anderson et al., 2016). Despite this, there has been little application of these findings to falls prevention intervention planning and development.

Most falls prevention research has involved female participants, and as a result, much of the qualitative data, including preferences and perspectives have been collected from women, not men. Consequently, it is likely that falls prevention interventions and programmes, including classes, have been based on these preferences, in conjunction with the exercises that have proven to be most effective in preventing falls. Those programmes, particularly classes, are mostly utilised by women and there are far fewer men attending.

The data collected in this study draws a clear link between how men view health, falls and exercise and the relatively small numbers of men who attend exercise classes for falls prevention. This is in contrast with the study by Sandlund et al. (2018) who found that there were more similarities than differences in gender preferences for falls prevention exercise. Limitations for those studies were discussed in the literature review. The views of the men in this study are summarised below and studies from the literature review in chapter two are drawn on to highlight those views.

In all three focus groups, the men had a clear understanding that physical activity or exercise was important for health and wellbeing but were vague about strength and balance exercise related to falls prevention. Having said that, some men felt they were ‘doing enough exercise’ and listed several activities or hobbies they engaged in, such as, walking, bowls and gardening. A few men openly discussed how much walking they do in a day, and some used an electronic step counter to keep track

of their goals for the day. Chodzko-Zajko et al. (2009) stated that this is common for older adults and that physical activities of a lower intensity are most popular, including walking and sports such as golf. The men also talked of exercise in a different way to what the researcher had defined. They spoke of 'doing fitness' rather than exercise for falls prevention or physical activity and used terms such as 'strong', 'fit' and 'active'. Similar terms were found to be used by men in the study by Sandlund et al. (2018). Women talked about their abilities to do everyday tasks or activities of daily living, compared to the men who spoke about these in terms of 'keeping fit'. This was at times confusing for the researcher; however, it was clear that most of the men were defining exercise and physical activity differently to how exercise for falls prevention is marketed or described. This was despite clarification being given during several points of the focus group and the study information sheet being provided. There was 'fitness' on one hand and then on the other was 'being active'. Classes seemed to fall into the 'fitness' category.

The men in the study all reported that they try to take care of themselves by keeping active and engaged in activities they enjoy although they do not always seek support or help with their health and wellbeing. This was consistent with the findings by Johnson et al (2008) who state that men do care about their health and wellbeing but find it difficult to engage with services. Another study by Bredland et al. (2015) reported that when men have health issues, they are reluctant to seek help or advice from a professional. Attempts have been made to explore this, particularly in men's health literature, and the social construct of masculinity has been suggested to play an important role in the lack of engagement with health services, as well as, adopting fewer health promoting behaviours (Courtenay, 2000, 2009; Evans et al., 2011). It has been suggested that in many cases, men make deliberate attempts to preserve their masculinity by hiding their health issues and in some cases disabilities from health professionals (Charmaz, 1994; Courtenay, 2000). This became apparent with the men in the 'non-exercisers' group, who stated they would minimise the impact of a fall or deny it had occurred altogether. There was not the same sense of embarrassment or indignity associated with admitting they had fallen in the men from 'exercisers' group. Most clearly stated that they had either had a fall or were worried about falling as the motivator to attend classes. Nonetheless, those men also stated that it would not be uncommon for many men to deny a fall had occurred.

The non-reporting of falls by men could have widespread consequences for the health sector. Firstly, from a statistical perspective, the numbers of men who sustain a fall and who report a fall could differ from reported numbers. This has an impact on how health services and interventions are prioritised, funded and provided. Secondly, men may not consider themselves in need of falls prevention interventions because they are not acknowledging they are or could be a 'falls risk'. This is consistent with the findings from studies that have considered how men and women differ in seeking medical care for falls (Stevens et al., 2012), who is more likely to take up interventions for falls prevention (Finnegan et al., 2019; Kiami et al., 2019; Yardley et al., 2006) and who is in the greater need for falls prevention interventions. The main factors contributing to participation and uptake of falls prevention interventions are; a fear of falling, a falls history, perceived need for falls intervention and a belief that one can reduce their individual falls risk (Finnegan et al., 2019; Kiami et al., 2019; Yardley et al., 2006). Therefore, if a person does not consider themselves to be a falls risk or even admit a fall has occurred, they are far less likely to engage in falls prevention interventions. Furthermore, both men and women reported that women are more in need of falls prevention interventions and programmes than men (Clark et al., 2013; Sandlund et al., 2017). There is clearly a need for improved marketing and education in the older population around managing falls risk and the benefits of interventions for both men and women.

Overcoming participation barriers

Engaging older men in any health promotion programme is known to be a significant issue, including exercise (Anderson et al., 2016). To engage more men in exercise for falls prevention, some key barriers need to be explored further. These barriers were identified by the men in the study outlined in Chapter 3. Some of which had been discussed previously in Chapter 2. These include: women outnumbering men in classes, conflict between male gender roles (masculinity), perception of who the classes are targeting, the structure or content of the class or programme and a preference for other activities (Anderson et al., 2016; Dunlop & Beauchamp, 2013; Liddle et al., 2017).

All the men in this study identified that there is a perception amongst most men, including their friends and family, that exercises classes were mostly aimed at women and that marketing and verbal recommendations from health professionals reflected this view. Most men stated they have not received advice or encouragement from a health professional to attend a class, but they would be more inclined if it came from a GP or specialist. The few men who were attending had their own motivations to do so, such as, the experience of a medical event. They stated it was not common for men to attend classes as it is perceived to be ‘a sissy thing’. The men perceived that marketing and advertising of exercise classes were also aimed at women and that the men who feature in advertising appear too old for them to relate to. Marketing for men’s health is an important topic to explore as there have been many successful campaigns involving or targeting men specifically

The men’s cancer survivorship and rehabilitation programme, called ‘STEEL’, is an example of successful and targeted marketing. The programme website identifies that it recognises and supports the fact that men’s rehabilitation needs are different to women and uses terminology such as strength, courage and resolve in the description. In contrast, the ‘PINC’ programme, which is aimed at women, uses words such as care, support and guide in their messaging and marketing (pincandsteel, n.d). This considered use of wording in marketing could also be applied to falls prevention programmes to attract men to classes.

Men who were classified in the study as ‘non-exercisers’ had varying reasons for not attending structured exercise sessions, namely falls prevention classes. Some included location, cost, convenience, and individual motivation, although they all stated that most classes are filled with women, and this deterred them from attending. This was deemed a barrier to attendance because the men used words like ‘intimidating’ and ‘cliqey’ when describing the groups or classes, and to attend would be ‘an invasion into their territory’. The also said that if they do attend, or have attended classes previously, the men tended to ‘stick together’. The men, who are members of a local club, enjoy the fact that they are only in the company of other men, and this is what, in part, keeps them going back. Some of the men who attend classes stated that they had tried to encourage their male friends to join, but almost all had declined the offer. The barrier of women outnumbering men was also identified by exercise coordinators in a study by Anderson et al (2016). The exercise coordinators were involved in a series of surveys and focus groups to gain perspectives on barriers and strategies in recruiting and engaging older men in health promotion programmes.

There is no easy solution to overcoming the barrier of women outnumbering men in exercise classes, specifically falls prevention classes. In fact, increasing numbers of men in already established classes might not be the best way forward. Gender segregated exercise classes could be one possible solution to attracting more men. Dunlop and Beauchamp (2013) explored gender views with men from ‘the lively lads fitness program’ based in Canada by aiming to identify the elements of a gender segregated programme success and appeal. They reported that the men stressed being uncomfortable exercising in the company of women and that the gender-segregated structure of the program gave the men an increased sense of camaraderie and security. Another popular example of a gender segregated club or group would be ‘Men’s Shed’. The ‘Men’s Shed’ movement developed in Australia with a focus on wellbeing and engagement in meaningful occupation. At ‘the shed’ men are able to spend time with each other in friendship and share a sense of values and most importantly t provides a sense of camaraderie later in life through the many productive activities (Golding, 2011b; Sunderland, 2013). If men do feel more comfortable exercising in the company of other men, and do not feel that current exercise class programmes meet their needs, a gender- based approach is worth exploring.

Another option to engage more men in exercise for falls prevention, could be a home exercise programme. This method has proven to be a cost-effective intervention to reduce falls for adults living in the community, but on the other hand it is no more effective than group-based exercise programmes (Ng et al., 2019). Effective home-based interventions tend to be delivered as, or based on, The Otago Exercise Program (OEP) first developed by Campbell & Robertson in 2003 (Ng et al., 2019). There were mixed views on home exercise programmes amongst the men in this study. Some felt it could work and others declared, 'it would be a waste of time'. Individual factors undoubtedly play a role in motivation to exercise at home. However, in a study by Liddle et al, (2017) seven out of the eleven men continued to do all, or at least some, of the exercises they were taught as part of the Stepping On programme. Men from two separate 'Men's Shed' completed the Stepping On falls prevention program developed in Australia by Clemson et al, (2014) which is a group-based programme targeting people over the age of 65. It aims to improve self-efficacy around falls risk and increase general everyday safety with strategies. After completing the programme, it was not only found that the educational component of the programme was important for preventing future falls but also for adopting a change in lifestyle. Additionally, it was noted that the men were selective in what actions they took and if they continued the exercises prescribed. The study concluded that older men need programme content and activities that are more closely orientated to them specifically or presented in a way that is personally meaningful. In other words, the content needed to be relevant and useful to them as an individual and that they could see the value in engaging in some of the interventions.

Men's Shed and similar male friendly clubs or groups do offer a unique opportunity to engage with older men about health promotion and falls prevention. Researchers and health promoters need to adapt what is currently being offered to make it more attractive and accessible to men or develop something more tailored to their needs. Liddle et al. (2017) was the only intervention study found to use an evidence-based falls prevention programme and adapt it to fit the needs of older men.

Summary

The aim of this study was to better understand older men's perspectives of exercise classes for falls prevention and more specifically, the barriers to attending and the potential motivators that would facilitate more men to attend. The research question for this study was, "How can older men be better engaged in falls prevention exercise classes and programmes? However, this study identified more than barriers and motivators to attend current exercise classes and programmes. It suggests that fundamentally older men have different views and perspectives on falls, health and exercise than women which impacts significantly on their engagement. This idea emerged through analysis of the data and was not part of the original research aim or question. It is likely that these differences will continue to have an impact on current exercise programme uptake and ongoing participation of men. Furthermore, based on the literature review and findings from this study, older men may benefit from a different, potentially gender-based approach to exercise for falls prevention. This encompasses the environment of the intervention or programme, the other participants, as well as the content of the programme or intervention in order to increase engagement and therefore reduce falls and falls risk.

Overall, the men from all focus groups had more similarities in their views and perspectives about participation in exercise classes than differences. This is an important finding because none of the studies identified in the literature review regarding gender perspectives on falls prevention included participants who already attended classes, and only one included just men (Liddle et al., 2017). Furthermore, the men included in the study, who did not attend classes already, had a unique perspective about health, exercise and falls. This is because they represent the views of many older men who are not engaged with targeted health promotion and exercise programmes, do not see their GP that often and 'only complain when there is something to complain about'. In some ways these men could be categorised as quintessential 'kiwi blokes'. These men are representative of a target audience in falls prevention research and these views have not been previously explored in any depth.

Current programmes and classes can be better marketed towards men by having the content or environment adapted or modified to better suit them. While this is true, it

is unlikely that this will dramatically change the ratio of women to men attending classes, the number of men participating in strength and balance exercise in general, or the rate and risk of falls in older men. The types of exercise that are most beneficial to reduce falls and falls risk have been widely researched and have not been based on gender preferences or views. However, if the falls and falls risk is to be reduced in men, like in women, something must change.

Strengths and limitations to this study

Some strengths and limitations need to be considered as part of this study. Firstly, the timeframe for completing the data collection was limited. As a result, the participants in the study would be considered a relatively small sample size and could not be considered as representative of all older men's views on exercise classes for falls prevention. To add further weight to the findings, the study could have included participants from different ethnicities and cultures, in particular Māori, and different geographical locations for example, rural and urban. Since it was not a requirement for participation in the study, and participants' cultural backgrounds and ethnicity were not recorded, these would be recommendations for further research in this area.

One strength was, at the time of the data collection, it was the only study to date that included both men who already attended classes, and those who did not. An opportunity to compare views and identify similarities and differences regarding falls prevention exercise interventions was unique. It also identifies a clear gap from previous studies which have only compared views from both genders in a more general sense.

References

- Accident Compensation Corporation. (ACC, 2019). Falls and fractures outcome dashboard. Retrieved on March 29 2021, from <https://www.livestronger.org.nz/home/health-sector-information-and-dashboard/falls-and-fractures-outcomes-dashboard/>
- Age UK. (2012). Don't mention the 'F' word. Retrieved on May 20. 2021, from https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/health--wellbeing/rb_2012_falls_prevention_dont_mention_the_f_word.pdf
- Almarzouki, R., Bains, G., Lohman, E., Bradley, B., Nelson, T., Alqabbani, S., Alonazi, A., & Daher, N. (2020). Improved balance in middle-aged adults after 8 weeks of a modified version of Otago Exercise Program: A randomized controlled trial. *PLoS ONE*, *15*(7 July). <https://doi.org/10.1371/journal.pone.0235734>
- Anderson, C., Seff, L. R., Batra, A., Bhatt, C., & Palmer, R. C. (2016). Recruiting and Engaging Older Men in Evidence-Based Health Promotion Programs: Perspectives on Barriers and Strategies. *Journal of Aging Research*, *2016*. <https://doi.org/10.1155/2016/8981435>
- Barmantloo, L. M., Olij, B. F., Erasmus, V., Smilde, D., Schoon, Y., & Polinder, S. (2020). Personal preferences of participation in fall prevention programmes: A descriptive study. *BMC Geriatrics*, *20*(1), 1–12. <https://doi.org/10.1186/s12877-020-01586-9>
- Baxter, G. D., Liu, L., Connolly, M. J., Theodore, R., Brunson, J., & Nicholson, H. (2017). Seven things you need to know about men's health. *New Zealand Medical Journal*, *130*(1463), 7–10.
- Bredland, E. L., Magnus, E., & Vik, K. (2015). Physical activity patterns in older men. *Physical and Occupational Therapy in Geriatrics*, *33*(1), 87–102. <https://doi.org/10.3109/02703181.2014.995855>
- Bredland, E. L., Söderström, S., & Vik, K. (2018). Challenges and motivators to physical activity faced by retired men when ageing: A qualitative study. *BMC*

- Public Health*, 18(1), 1–9. <https://doi.org/10.1186/s12889-018-5517-3>
- Bunn, F., Dickinson, A., Barnett-Page, E., McInnes, E., & Horton, K. (2008). A systematic review of older people's perceptions of facilitators and barriers to participation in falls-prevention interventions. *Ageing and Society*, 28(4), 449–472. <https://doi.org/10.1017/S0144686X07006861>
- Cavill, N. A., & Foster, C. E. M. (2018). Enablers and barriers to older people's participation in strength and balance activities: A review of reviews. *Journal of Frailty, Sarcopenia and Falls*, 03(02), 105–113. <https://doi.org/10.22540/jfsf-03-105>
- Chang, V. C., & Do, M. T. (2015). Risk factors for falls among seniors: Implications of gender. *American Journal of Epidemiology*, 181(7), 521–531. <https://doi.org/10.1093/aje/kwu268>
- Charmaz, K. (1994). Identity Dilemmas of Chronically Ill Men. *Sociological Quarterly*, 35(2), 269–288. <https://doi.org/10.1111/j.1533-8525.1994.tb00410.x>
- Cheal, B., & Clemson, L. (2001). Older people enhancing self-efficacy in fall-risk situations. *Australian Occupational Therapy Journal*, 48(2), 80–91. <https://doi.org/10.1046/j.1440-1630.2001.00250.x>
- Cheng, P., Tan, L., Ning, P., Li, L., Gao, Y., Wu, Y., Schwebel, D. C., Chu, H., Yin, H., & Hu, G. (2018). Comparative effectiveness of published interventions for elderly fall prevention: A systematic review and network meta-analysis. *International Journal of Environmental Research and Public Health*, 15(3). <https://doi.org/10.3390/ijerph15030498>
- Chodzko-Zajko, W. J., Proctor, D. N., Fiatarone Singh, M. A., Minson, C. T., Nigg, C. R., Salem, G. J., & Skinner, J. S. (2009). Exercise and physical activity for older adults. *Medicine and Science in Sports and Exercise*, 41(7), 1510–1530. <https://doi.org/10.1249/MSS.0b013e3181a0c95c>
- Clark, L., Thoreson, S., Goss, C. W., Zimmer, L. M., Marosits, M., & DiGuseppi, C. (2013). Understanding fall meaning and context in marketing balance classes to older adults. *Journal of Applied Gerontology*, 32(1), 96–119.
- Clemson, L., Fiatarone Singh, M. A., Bundy, A., Cumming, R. G., Manollaras, K., O'Loughlin, P., & Black, D. (2012). Integration of balance and strength training into daily life activity to reduce rate of falls in older people (the LiFE study): Randomised parallel trial. *BMJ (Online)*, 345(7870).

<https://doi.org/10.1136/bmj.e4547>

- Courtenay, W. (2009). Theorising masculinity and men's health. In *Men's health: Body, identity and social context*.
<https://books.google.co.uk/books?hl=en&lr=&id=9hexN6JAVrYC&oi=fnd&pg=PA9&dq=health+and+place+and+masculin&ots=PzV7o1e3bZ&sig=VnCFB5Z99CMqKgxYvwpQtFSzyDk#v=onepage&q&f=false>
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's wellbeing: a theory of gender and health. *Social Science & Medicine*, 50, 1385–1401. <http://www.postpartummen.com/pdfs/SS&M.PDF>
- Drummond, M. (2003). Retired Men, Retired Bodies. *International Journal of Men's Health*, 2(3), 183–199. <https://doi.org/10.3149/jmh.0203.183>
- Dunlop, W. L., & Beauchamp, M. R. (2011). En-gendering choice: Preferences for exercising in gender-segregated and gender-integrated groups and consideration of overweight status. *International Journal of Behavioral Medicine*, 18(3), 216–220. <https://doi.org/10.1007/s12529-010-9125-6>
- Dunlop, W. L., & Beauchamp, M. R. (2013). Birds of a Feather Stay Active Together: A Case Study of an All-Male Older Adult Exercise Program. In *Journal of Aging and Physical Activity* (Vol. 21). www.JAPA-Journal.com
- Dunlop, William L., & Beauchamp, M. R. (2011). En-gendering choice: Preferences for exercising in gender-segregated and gender-integrated groups and consideration of overweight status. *International Journal of Behavioral Medicine*, 18(3), 216–220. <https://doi.org/10.1007/s12529-010-9125-6>
- Ebeling, P. R., Cicuttini, F., Scott, D., & Jones, G. (2019). Promoting mobility and healthy aging in men: a narrative review. *Osteoporosis International*, 30(10), 1911–1922. <https://doi.org/10.1007/s00198-019-05080-w>
- Evans, J., Frank, B., Oliffe, J. L., & Gregory, D. (2011). Health, Illness, Men and Masculinities (HIMM): A theoretical framework for understanding men and their health. *Journal of Men's Health*, 8(1), 7–15.
<https://doi.org/10.1016/j.jomh.2010.09.227>
- Finnegan, S., Bruce, J., & Seers, K. (2019). What enables older people to continue with their falls prevention exercises A qualitative systematic review. In *BMJ Open* (Vol. 9, Issue 4). BMJ Publishing Group. <https://doi.org/10.1136/bmjopen-2018-026074>

- Freeman, T. (2006). "Best practice" in focus group research: Making sense of different views. *Journal of Advanced Nursing*, 56(5), 491–497.
<https://doi.org/10.1111/j.1365-2648.2006.04043.x>
- Garfield, C. (2008). A Review of Men's Health and Masculinity. *American Journal of Lifestyle Medicine*, 2, 474–487. <https://doi.org/10.1177/1559827608323213>.The
- Gillespie, L. D., Robertson, M. C., Gillespie, W. J., Lamb, S. E., Gates, S., Cumming, R. G., & Rowe, B. H. (2009). Interventions for preventing falls in older people living in the community. In *Cochrane Database of Systematic Reviews* (Issue 2).
<https://doi.org/10.1002/14651858.CD007146.pub2>
- Gillespie, L. D., Robertson, M. C., Gillespie, W. J., Sherrington, C., Gates, S., Clemson, L. M., & Lamb, S. E. (2012). Interventions for preventing falls in older people living in the community. In *Cochrane Database of Systematic Reviews* (Vol. 2012, Issue 9). John Wiley and Sons Ltd.
<https://doi.org/10.1002/14651858.CD007146.pub3>
- Golding, B. (2011a). Older men's wellbeing through community participation in Australia. *International Journal of Men's Health*, 10(1), 26–44.
<https://doi.org/10.3149/jmh.1001.26>
- Golding, B. (2011b). Older men's wellbeing through community participation in Australia. In *International Journal of Men's Health* (Vol. 10, Issue 1, pp. 26–44).
<https://doi.org/10.3149/jmh.1001.26>
- Group, A. and N. Z. H. F. R. S. (2019). *ANZHFR Annual Report 2019*.
- Health Quality and Safety Commission of New Zealand. (2019). *Reducing harm from falls : Recommended evidence-based resources 2019 Includes systematic reviews , clinical guidelines and toolkits* (Issue April). www.hqsc.govt.nz
- Herrera, A. P., Snipes, S. A., King, D. W., Torres-Vigil, I., Goldberg, D. S., & Wenberg, A. D. (2010). Disparate inclusion of older adults in clinical trials: priorities and opportunities for policy and practice change. *American Journal of Public Health*, 100(SUPPL. 1). <https://doi.org/10.2105/AJPH.2009.162982>
- Johnson, L., Huggard, P., & Goodyear-Smith, F. (2008). Men's health and the health of the nation. *New Zealand Medical Journal*, 121(1287), 69–76.
- Kannegaard, P. N., van der Mark, S., Eiken, P., & Abrahamsen, B. (2010). Excess mortality in men compared with women following a hip fracture. National analysis of comedication, comorbidity and survival. *Age and Ageing*, 39(2), 203–209.

- <https://doi.org/10.1093/ageing/afp221>
- Kiami, S. R., Sky, R., & Goodgold, S. (2019). Facilitators and barriers to enrolling in falls prevention programming among community dwelling older adults. *Archives of Gerontology and Geriatrics*, 82(May), 106–113.
<https://doi.org/10.1016/j.archger.2019.01.006>
- Kielhofner, G. (2009). *Conceptual foundations of occupational therapy practice. (4th Ed)*. Philadelphia: F.A. Davis Company.
- Kitzinger, J. (1995). Qualitative Research: Introducing focus groups. *Bmj*, 311(7000), 299. <https://doi.org/10.1136/bmj.311.7000.299>
- Kosberg, J. I. (2005). Meeting the needs of older men: Challenges for those in helping professions. *Journal of Sociology and Social Welfare*, 32(1), 9–31.
- Krueger, R. A., & Casey, M. A. (2000). *Focus Groups: A Practical Guide for Applied Research - Richard A. Krueger - Google Books*. Thousand Oaks CA: Sage Publications.
<https://books.google.co.nz/books?hl=en&lr=&id=8wASBAAAQBAJ&oi=fnd&pg=PP1&dq=Krueger+RA,+Casey+MA.+Focus+Groups.+A+Practical+Guide+for+Applied+Research.+Thousand+Oaks+CA:+Sage+Publications,+2000.+&ots=XfbKCw9JsR&sig=oelQ1pXAmafqh7n4ZoGGreZnP-k#v=onepage&q&f=false>
- Liddle, J. L. M., Lovarini, M., Clemson, L. M., Jang, H., Lord, S. R., Sherrington, C., & Willis, K. (2019). Masculinity and preventing falls: insights from the fall experiences of men aged 70 years and over. *Disability and Rehabilitation*, 41(9), 1055–1062. <https://doi.org/10.1080/09638288.2017.1419381>
- Liddle, J. L. M., Lovarini, M., Clemson, L. M., Jang, H., Willis, K., Lord, S. R., & Sherrington, C. (2017). Men’s perspectives on fall risk and fall prevention following participation in a group-based programme conducted at Men’s Sheds, Australia. *Health and Social Care in the Community*, 25(3), 1118–1126.
<https://doi.org/10.1111/hsc.12412>
- Liljas, A. E. M., Walters, K., Jovicic, A., Iliffe, S., Manthorpe, J., Goodman, C., & Kharicha, K. (2019). Engaging “hard to reach” groups in health promotion: The views of older people and professionals from a qualitative study in England. *BMC Public Health*, 19(1), 1–16. <https://doi.org/10.1186/s12889-019-6911-1>
- Lindgren De Groot, G. C., Fagerström, L., Cathrine, G., & De Groot, L. (2011). Scandinavian Journal of Occupational Therapy Older adults’ motivating factors

- and barriers to exercise to prevent falls Older adults' motivating factors and barriers to exercise to prevent falls. *Scandinavian Journal of Occupational Therapy*, 18, 153–160. <https://doi.org/10.3109/11038128.2010.487113>
- Lindsay Smith, G., Banting, L., Eime, R., O'Sullivan, G., & van Uffelen, J. G. Z. (2017). The association between social support and physical activity in older adults: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1), 1–21. <https://doi.org/10.1186/s12966-017-0509-8>
- Loeb, S. J. (2004). Older Men's Health: Motivation, self-ratings, and behaviours. *Nursing Research*, 53(3), 198–206.
- Lord, S., Moyes, S., Teh, R., Port, W., Muru-Lanning, M., Bacon, C. J., Wilkinson, T., & Kerse, N. (2020). Gait, cognition and falls over 5 years, and motoric cognitive risk in New Zealand octogenarians: Te Puāwaitanga o Nga Tapuwae Kia Ora Tonu, LiLACS NZ. *BMC Geriatrics*, 20(1), 1–8. <https://doi.org/10.1186/s12877-020-1420-8>
- McKinlay, E., Kljakovic, M., & McBain, L. (2009). New Zealand men's health care: Are we meeting the needs of men in general practice? *Journal of Primary Health Care*, 1(4), 302–310. <https://doi.org/10.1071/hc09302>
- Milligan, C., Neary, D., Payne, S., Hanratty, B., Irwin, P., & Dowrick, C. (2016). Older men and social activity: A scoping review of Men's Sheds and other gendered interventions. *Ageing and Society*, 36(5), 895–923. <https://doi.org/10.1017/S0144686X14001524>
- Ng, C. A. C. M., Fairhall, N., Wallbank, G., Tiedemann, A., Michaleff, Z. A., & Sherrington, C. (2019). Exercise for falls prevention in community-dwelling older adults: trial and participant characteristics, interventions and bias in clinical trials from a systematic review. *BMJ Open Sp Ex Med*, 5, 663. <https://doi.org/10.1136/bmjsem-2019-000663>
- Nyman, S. R., & Victor, C. R. (2012). Older people's participation in and engagement with falls prevention interventions in community settings: An augment to the cochrane systematic review. *Age and Ageing*, 41(1), 16–23. <https://doi.org/10.1093/ageing/afr103>
- Park, B., & Lee, Y. J. (2020). Upcoming aging society and men's health: Focus on clinical implications of exercise and lifestyle modification. *World Journal of Men's Health*, 38(1), 24–31. <https://doi.org/10.5534/wjmh.180103>

- Puāwaitanga, T., Tapuwae, O. N., & Ora, K. (2014). Falls in advanced age : Findings from LiLACS NZ. *Lilacs Nz*, 1–11.
<https://www.fmhs.auckland.ac.nz/en/faculty/lilacs.html>
- Sandlund, M., Pohl, P., Ahlgren, C., Skelton, D. A., Melander-Wikman, A., Bergvall-Kåreborn, B., & Lundin-Olsson, L. (2018). Gender perspective on older people's exercise preferences and motivators in the context of falls prevention: A qualitative study. *BioMed Research International*, 2018.
<https://doi.org/10.1155/2018/6865156>
- Sandlund, M., Skelton, D. A., Pohl, P., Ahlgren, C., Melander-Wikman, A., & Lundin-Olsson, L. (2017). Gender perspectives on views and preferences of older people on exercise to prevent falls: a systematic mixed studies review. *BMC Geriatrics*, 17(1). <https://doi.org/10.1186/s12877-017-0451-2>
- Sherrington, C., Fairhall, N. J., Wallbank, G. K., Tiedemann, A., Michaleff, Z. A., Howard, K., Clemson, L., Hopewell, S., & Lamb, S. E. (2019). Exercise for preventing falls in older people living in the community. *Cochrane Database of Systematic Reviews*, 2019(1). <https://doi.org/10.1002/14651858.CD012424.pub2>
- Sims-Gould, J., Ahn, R., Li, N., Ottoni, C. A., Mackey, D. C., & McKay, H. A. (2018). “The Social Side Is as Important as the Physical Side”: Older Men's Experiences of Physical Activity. *American Journal of Men's Health*, 12(6), 2173–2182.
<https://doi.org/10.1177/1557988318802691>
- Singh, S., & Wassenaar, D. (2016). Contextualising the role of the gatekeeper in social science research. *South African Journal of Bioethics and Law*, 9(1), 42.
<https://doi.org/10.7196/sajbl.2016.v9i1.465>
- Stevens, J. A., Ballesteros, M. F., Mack, K. A., Rudd, R. A., DeCaro, E., & Adler, G. (2012). Gender differences in seeking care for falls in the aged medicare population. *American Journal of Preventive Medicine*, 43(1), 59–62.
<https://doi.org/10.1016/j.amepre.2012.03.008>
- Sunderland, J. (2013). *The Taieri Blokes Shed : An Ethnographic Study* (Issue September).
- Verdonk, P., Seesing, H., & De Rijk, A. (2010). Doing masculinity, not doing health? a qualitative study among dutch male employees about health beliefs and workplace physical activity. ¿Hacer masculinidad, no hacer salud? un estudio cualitativo entre empleados varones holandeses sobre creencias de sal. *BMC Public Health*,

10, 1–14.

- Wehren, L. E., Hawkes, W. G., Orwig, D. L., Hebel, J. R., Zimmerman, S. I., & Magaziner, J. (2003). Gender Differences in Mortality After Hip Fracture: The Role of Infection*. In *J Bone Miner Res* (Vol. 18).
- White, A., Sousa, B. De, Visser, R. De, Hogston, R., Madsen, S. A., Mckee, M., Raine, G., Richardson, N., Clarke, N., & Zaton, W. (2011). Men ' s health in Europe. *International Journal of Men ' s Health*, 8(3), 192–201.
- Wilson, N. J., & Cordier, R. (2013). *Review A narrative review of Men ' s Sheds literature : reducing social isolation and promoting men ' s health and well-being*. 21, 451–463. <https://doi.org/10.1111/hsc.12019>
- World Health Organization. (2007). WHO Global Report on Falls Prevention in Older Age. *Community Health*, 53.
http://www.who.int/ageing/publications/Falls_prevention7March.pdf
- Yardley, L., Donovan-Hall, M., Francis, K., & Todd, C. (2006). Older people's views of advice about falls prevention: A qualitative study. *Health Education Research*, 21(4), 508–517. <https://doi.org/10.1093/her/cyh077>
- Yardley, Lucy, Donovan-Hall, M., Francis, K., & Todd, C. (2007). Attitudes and beliefs that predict older people's intention to undertake strength and balance training. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, 62(2). <https://doi.org/10.1093/geronb/62.2.P119>
- Yardley, Lucy, Kirby, S., Ben-Shlomo, Y., Gilbert, R., Whitehead, S., & Todd, C. (2008). How likely are older people to take up different falls prevention activities? *Preventive Medicine*, 47(5), 554–558.
<https://doi.org/10.1016/j.ypmed.2008.09.001>

Appendices

Appendix A
Ethics approval letter

12 June 2019



Laura Hogue
Dunedin 9012

Dear Laura

Ethics: Does one size fit all? The participation of older men in strength and balance exercise in Otago, New Zealand

Thank you for your application.

We agree that you have addressed all of the issues we had concerns around and have approval to proceed with your research.

We wish you well with your study and remind you that at the conclusion of your research you should send a brief report with findings/conclusions to the Research Ethics Committee.

Sincerely,

H Croft

Hayden Croft
Acting Head of School

Appendix B
Participant Information Sheet



Otago Institute of Sport, Exercise and Adventure

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www.otagopolytechnic.ac.nz

Participant Information Form

Project title: The participation of older men in falls prevention exercise classes

General Introduction

- This research project will focus on exploring the views of older men (aged 60-85) around falls prevention exercise classes. The views can be from men who currently attend a class or group as well as those who do not.
- Falls prevention exercise classes typically involve a series of exercises that strengthen leg muscles and challenge balance. It is mainly aimed to help reduce falls and falls related injuries. The exercises are often delivered by a trained instructor or physiotherapist but can be offered in a variety of ways or formats.
- The data will be gathered either in focus groups. The researcher has a background in falls prevention and exercise, so she will use her knowledge in these areas to gain a deeper understanding if the views of women are different or similar to that of men

What is the aim of the project?

- The aim of this project is to gain a better understanding the views and experiences of older men regarding strength and balance exercise, and more specifically strength and balance classes

- The information gathered in this project will help both the exercise community and health professionals better understand what men's views are on strength and balance exercise in order to shape future directions and research for falls prevention interventions

What will my participation involve?

- If you have chosen to be part of the focus group you will be contacted directly by Laura with the details of the date, time and venue for which it will be held.
- If you have chosen to take part in an interview, Laura will contact you directly to arrange a date and time that is convenient for you. She will travel to your house or another venue of your choice.
- You will be given a \$20 grocery voucher for your time and input

Participant safety and disclosure

- It is important to disclose to the researcher if you have a long-term health condition affecting your ability to give informed consent e.g. cognitive impairment, dementia and/or mental health diagnosis. This may prevent you from participating, however, this will be discussed on a case by case basis.

How will confidentiality and/or anonymity be protected?

- Your identity will be protected at all times. Any information identifying you (e.g. name) will be removed from all data, e.g. you will be assigned a number to help the researchers identify you during the data collection process.
- All data (i.e. video files, interview transcripts, and statistics) will be stored in a secure location on the principal researcher computer (protected by a password).

Data Storage

- The data collected will be securely stored in such a way that only those mentioned above will have access to it. At the end of the project any personal information will be destroyed for any raw data on which the results are based.

This will be retained in secure storage for a period of five years, after which it will be destroyed (unless agreed otherwise on the consent form).

Can you change your minds and withdraw from the project?

- Yes, you can decline to participate without any disadvantage to yourself of any kind.
- If you choose to participate, you may withdraw from the project at any time, without giving reasons for your withdrawal. You have the right to withdraw their participation in any part of the research at any time (i.e. choose not to allow any of the data collected involving you to be included in the final study). To do this, please speak to Laura (The Researcher) directly, or contact her on the contact details provided below. You can also contact her supervisor Richard Humphrey if you prefer. Following your withdrawal from the study, your contributions will not be included in the final analysis of the data collection.

What if I have any questions?

- If you have any questions about the project, either now or in the future, please feel free to contact either:

Laura Hogue

Researcher

Master of Applied Science: Health and Exercise

Otago Institute of Sport, Exercise and Adventure

HOGUELJ1@student.op.ac.nz

Richard Humphrey

Principal Lecturer and Supervisor for Exercise and Health Masters programme

Otago Institute of Sport, Exercise and Adventure

Richard.Humphrey@op.ac.nz

Appendix C
Participant Consent Form



Otago Institute of Sport, Exercise and Adventure

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Participant Consent Form

Project title: The participation of older men in falls prevention exercise classes

I have read the Participant Information Form concerning this project and I understand what the project is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage. I know that:

- **My participation** in the project is entirely voluntary;
- I am free to withdraw at any time without giving reasons and without any disadvantage;
- Participation in any part of the research is optional, and I can take part in an interview or a focus group and choose not to allow an investigation of my assessments;
- The raw data and the results will be retained in secure storage for two years after which they will *be destroyed*. If it is to be kept longer than two years my permission will be sought;
- The results of the project will be published in a project report and may be published in a journal article and/or used at a presentation in an academic conference, but my anonymity / confidentiality will be preserved.
- I will also be given the opportunity to check the transcription of the observations and interviews in this study, but this is optional. I know I can withdraw any information I provide to the researchers up until they have started to analyse the transcriptions of the data.

I agree to take part in this project under the conditions set out below:

I consent to participation in a focus group

OR

I consent to participation in an interview

- I consent to the use of my own individual (anonymised) views be used in the study
- I **consent to my data** being used for publication in a journal article and/or used at a presentation in an academic conference) following the completion of this study

..... (signature of participant)

..... (date)

..... (signature of researcher)

..... (date)