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**Practice Based Enquiry (PBE)
Report**

**Strategies for Encouraging Participation and
Successful Teaching of Older Adults in Group
Exercise and Fitness Activities.**

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Abstract

This report looks at exercise participation and teaching and motivational strategies used when teaching older persons (50+) in a group exercise and fitness environment. Perceived and real barriers to participation of older people in exercise and fitness are examined. Learning styles of older individuals and teaching strategies employed by tutors of older people in group exercise classes are investigated. Tutor rewards and enjoyment are also examined. Recommendations are given for wider participation in exercise and fitness by the older person as are teaching strategies and motivational tips to ensure successful, safe and effective classes.

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Introduction

The reason that I have chosen to research teaching and learning for the older adult with particular focus on exercise and fitness stems from my interest in Gerontology. The foundations of this interest were laid during my Masters Degree in Life Course Development which was completed approximately six years ago. I believe that this area of teaching and learning, although poorly funded and not fashionable at the moment will become an important area of work for many educationalists.

In 1994 there were 357 million people over the age of 65 in the world, this figure is expected to double between now and the year 2025 (Jones and Rose 2005 p xiii). By the year 2030 persons 85 years and older will be the fastest growing population in the United States (Mazzeo et. al. 1998) and this will be reflected in the United Kingdom. This explosion of the older adult population brings with it many serious challenges, but also a wealth of opportunity for teachers in the field of exercise and fitness.

Much has been written about teaching children and a wealth of material exists on teaching adults. I would like to examine the teaching of older people from age 50 plus. This group of people, classified as 'old' by the World Health Organisation (WHO) will make up the largest percentage of the population in the next few years. With the imminent ageing of the millions of 'baby boomers', many now reaching retirement age this could be the future of education for

many teachers. Countless older people will not retire and vegetate but will seek out new challenges, many of whom will require levels of health and fitness only achieved by regular exercise. As society re-evaluates the concept of old age and becomes more educated to the benefits associated with a healthy lifestyle, this will be the choice of many. Although much research has been conducted into the field of gerontology I can find little on the subject of 'gerogogy' as the strategies used in teaching older adults are referred to. This is particularly pertinent in the area of teaching exercise and fitness where much research exists on the beneficial effects of exercise and fitness. However, there has been little research conducted or evidence tabled of how to actually teach it or help to make exercise and fitness more palatable to an older population.

Health clubs, leisure centres and gyms are now targeting the older exerciser. This population is now being seen by the fitness industry as an important growth area. The increase in financial security that many older people experience added to the demographics and combined with the increased awareness of the benefits of exercise make this area important for the exercise and fitness educator. However, the teaching of a safe and effective exercise format for seniors requires much more knowledge than that required in the teaching of younger adults.

Reference to the literature

Defining Old Age

Although this may sound simple it is in fact very complex. Gerontology uses three common indicators to specify old age. Firstly, chronological age; defined as the passage of time from our birth date. Secondly, biological age; sometimes called primary ageing which is defined as 'a group of processes within the body that eventually lead to loss of adaptability, disease, physical impairments, functional limitations, disability and eventual death' (Jones and Rose 2005 p6). The final term is functional age; this is defined as the contrast of functional fitness with others of the same gender and age. For this study I will use chronological age as an indicator of old age and will define it in the following way.

Young old (ages 65 – 74 years)

Middle old (ages 75 – 84 years)

Old old (ages 85 – 99 years)

Although I do not anticipate any respondents older than 99 years, for the record oldest old are people aged 100 years and over.

Successful Ageing

The concept of successful ageing is quite difficult to identify because of its multifaceted nature. The factors which play a part in successful ageing include longevity, physical and mental health, satisfaction with and control of one's life.

Many academics have tried to define successful ageing, these include; Havighurst (1961) who first coined the term successful ageing and described it as 'adding life to the years' and 'getting satisfaction from life.' Rowe and Kahn (1987) defined successful aged people with better than average physiological and psychosocial characteristics in late life and healthy genes, they also concluded that individuals who successfully age have two additional traits; low risk of cognitive and physical diseases and disabilities until the age of 80 or more, and life satisfaction with their social, mental, physical emotional and spiritual well being. Palmore (1979) describes longevity, lack of disability and life satisfaction as significant indicators of successful ageing.

The World Health Organisation (1998) listed the following predictors of successful ageing;

- Genetics
- Health and social services
- Lifestyle choices
- Psychological attributes
- Life events
- Socioeconomic status
- Physical and social environment
- Culture and gender

American College of Sports Medicine (ACSM) Position stand on exercise and physical activity for the older adult

When analysing the literature regarding the teaching and learning of the older adult with specific reference to exercise and the older person it would seem proper to investigate the American College of Sports Medicine (ACSM) position stand on exercise and physical activity for the older adult. This document is the bench mark publication to which all exercise prescription, throughout the world, should reflect. Before we can look at how older peoples' learning needs change as they age I think it would be prudent to examine what physical activity is recommended and how it affects the participant before we can examine strategies for teaching it.

This position stand was published in 1998 and was written for the ACSM by Mazzeo, Cavanagh, Evans, Fiatarone, Hagberg, McAuley and Startzell. In this report the complex process of ageing and its many variables are examined. It is explained that the position stand focuses on five major areas of importance which include: (1) cardiovascular response to both acute and chronic exercise; (2) strength training, muscle mass and bone density implications; (3) postural stability, flexibility and prevention of falls; (4) the role of exercise on psychological function and (5) exercise for the old, old and frail. Surprisingly, the recommended guidelines for exercise for the older adult are very similar to that of the healthy younger person. This should include a frequency of a minimum five days per week for moderate intensity or three days per week for vigorous intensity which should last for 30 minutes moderate intensity or 20 minutes vigorous intensity per session aerobic activity. A frequency of two sessions per week is recommended for muscular strength training. We should be exercising eight to ten muscles or muscle groups to

fatigue for 10 – 15 repetitions. Flexibility training should be included for at least two days per week and for those at risk of falls balance training should be included in the overall exercise programme. Balance training is something that is not included in the recommendations for younger adults and therefore I would like to investigate it further.

The importance of postural stability and flexibility in older adults is well documented and evidence that this declines with age has been presented by many research studies (Ehsani, et al. 1981, Hasselkus and Shambes, 1975, Hellebrandt and Braun 1939, Pyykko, Aalto, Hytonrn, Starck, Jantti and Ramsay 1998, Sheldon 1963, Woolacott and Shumway-cook 1990). The ACSM position stand paper argues that the most definitive measure of postural stability is the frequency of falling although there is no general agreement regarding the optimal approach. Research shows that trained subjects fell less frequently than their non trained counterparts (Hu and Woollacott 1994). The ACSM recommend that a broad-based exercise programme that should include resistance training, balance training, walking and weight transference should be included as part of a multifaceted intervention to reduce the risk of falling in the older population.

Flexibility declines with age with the maximum range of motion seen in the mid to late 20's for men and women respectively (Bell and Hoshizaki 1981, Greey 1955, Jervey 1961). The ACSM paper argues that there has been relatively little research in the area of flexibility in older persons. Whilst there is evidence that flexibility can be increased by exercise in healthy adults the literature does not

provide evidence at the moment for the design of a systematic and cost effective exercise programme to improve flexibility and calls for more research to be done on this subject.

Exercise for the frail and very old

Not long ago exercise was generally considered unsuitable for the frail or the old, old individual due to the low expectations of benefit as well as fears of exercise related injury. Recently however, research has turned these myths around and can now provide data that substantiates the benefits and safety of exercise in the oldest of adults (Fiatarone and Evans 1990). Younger peoples goals of exercise include prevention of Cardiovascular disease, cancer, diabetes and an increase in life expectancy. These aspirations are replaced in older people with a differing set of goals which include minimising the biological changes of ageing (Fiatarone and Evans 1993), reversing disuse syndrome (Bortz 1982), the control of chronic diseases (Evans et al. 1991. Nelson et al. 1994, Oddis 1996) maximising psychological health (Sing, Clements and Fiatorne 1997a, Sing, Clements and Fiatorne 1997b) and increasing mobility and daily functionality (Fiatarone et al. 1994, Ory, Schechtman and Miller et al. 1993). The contraindications of exercise in the older population are not different to that of younger individuals (American College of Sports Medicine 1995). Although, in cases of very elderly or frail individuals, training programmes should be adapted to accommodate any disabilities (Naso, Carner and Blandford- Doyle et al. 1990). Only in a very small number of individuals is avoidance recommended. For example, in a small number of incurable conditions, and happily, no reports are included in the literature on exercise

training between the ages of 80 and 100 years of serious cardiovascular incidents or sudden death. As with younger individuals people who gain most are those with the weakest muscles but with the largest reserves of lean tissue.

The principles of specificity that apply to younger adults also apply to frail elderly where high intensity progressive resistance training (80% of one repetition maximum) (Fiatarone et al.1994) show better increases in muscle mass and strength rather than lower intensity programmes where little if any gains in strength are reported (Mulrow, Gerety and Kanten et al. 1994).

ACSM recommend that strength training be incorporated into the lifestyle of frail elderly at least two days but preferably three days per week with two – three sets performed on each training day. Free weights should be included in the training programme to enhance balance and co-ordination. Balance work should also be incorporated into the training. Supervision is essential for a frail group for safety and progression to occur. There is a call for more education in this area particularly to carers for which exercise is still an unfamiliar and perhaps frightening concept.

The ACSM position stand outlines very thoroughly the recommendations for exercise and physical activity for the older person. However, what it does not address is how we as fitness professionals address the challenges that an ever increasing population of older individuals bring. How do we motivate these clients into regular exercise and teach the benefits that an active lifestyle brings?

Teaching and learning and the older adult (Exercise and Fitness)

One publication that does address these issues is Jones and Rose's (Eds.) (2005) book *Physical Activity Instruction of Older Adults*. This comprehensive manual for the teacher of exercise to older adults is an invaluable resource. The book is set out in five parts; part one Overview of Aging and Physical Activity, part 2 Screening, Assessment and Goal Setting, part 3 Core Program Principles and Training Methods, part 4 Speciality Programs and Training Methods, Part 5 Program Design, Leadership and Risk Management.

In part 5 Program Design, Leadership and Risk Management two chapters are devoted to that art and science of teaching. In chapter 19 teaching and leadership skills within a group exercise class are examined. The competent exercise teacher is compared to an 'orchestra conductor where several movements are occurring simultaneously, the teacher needs an astute eye, a razor sharp ear and sensitivity to the participants in order to create a harmonious occurrence'. The authors argue that teaching skills are learned in developmental stages over time through education, observation, planning, preparation, practice and self evaluation. The text goes on to discuss ten logical steps to develop lesson plans. Then there is a detailed examination and breakdown of teaching cues used in an exercise format. Three cueing methods for leading group exercise classes are examined; physical, visual and verbal cueing (Kennedy 2000). The chapter then goes on to examine elements of successful instruction drawing some basic tips and recommendations for effective teaching in a group exercise setting. Personality types that an instructor may encounter in their classes are examined. Characteristics of these

personality types are listed and effective strategies for dealing with these types are discussed. The chapter goes on to look at leadership skills with an in-depth examination of the responsibilities needed to be fulfilled when working with older adults. Useful tips for being supportive to class members are incorporated into this chapter. Teachers are encouraged to use care, compassion and positive reinforcement in their teaching strategies. The chapter closes with an examination of other characteristics of good leadership needed for effective teaching of older adults.

In the next chapter *Designing and Managing Group Conditioning Classes* by Clark, J.T. the key principles of group dynamics are examined. It is argued that exercise adherence by older people increases when being part of a group promotes feelings of team purpose towards completing a task (Annesi and Zimmerman, 2001). A new member orientation checklist is included in the chapter which gives a comprehensive list of steps to help new members to an exercise class enter their new group setting smoothly. The text then goes on to examine instructor to group feedback and notes that a teacher should convey honesty, tact, respect and a positive tone when providing feedback (Clark, 2003). Gender, ethnicity and cultural sensitivity are focused on with recommendations by Ward (1997) to communicate respect and acceptance of the individuality of all participants. Injury preventions within a group exercise format are covered as are additional group management considerations and empowerment techniques for participants. Considerable space is given over to making group activity fun with class creativity and variety covered. Examples of

suitable class formats for the older exerciser are given as well as some additional training options.

Record management, pre-exercise questionnaires, participation feedback records and marketing considerations finish off this chapter. An example of a group participant feedback form is included as a model of good practice. Advice is given on underused marketing vehicles as a tool for targeting participants' examples of classes include classes for people with particular medical conditions (Diabetes, Arthritis, Parkinson's disease), classes for weight loss and stress management as well as sports specific programs for Golf, Tennis or Skiing etc.

Teaching and learning and the older adult (General)

The European Commission (2007) recognises the importance of adult learning and this is increasingly being acknowledged by its Member States. However, with some exceptions, the implementation of adult learning remains weak and is still unsatisfactory in many Member States. In addition in most countries, education and training systems are still largely focused on the education and training of young people. Adult learning has not yet gained the recognition it deserves in terms of visibility, policy prioritisation and resources.

With regard to work based learning and opportunity, the institute for employment studies research (Newton et. al. 2006) shows that from the age 50 onwards workers are less likely to be offered training than when younger. The peak, for training opportunity, appears to be between ages 25-49. At age 25 c.

70% of workers are offered training of some kind, by age 60 this has dropped to c. 60% and at age 65 down to 40%. Figures from the Learning and Skills Council, National Employers Skills Survey (2003) reflect this with their figures showing a minuscule amount of work based learning for the over 60's. The report points out that there are unsubstantiated myths which are nevertheless commonly held. Additionally it is believed that it is a waste of money to train older workers and again this is disproved both because the company will have a better, more productive worker and because an older more satisfied worker is less likely to change company nor to retire at the first opportunity. This latter point becomes more important as the cost of education and training rises. This is also true of a fitter healthy workforce and as the demographics of the population change this will be an important factor in the economic wellbeing of the nation. Other countries have already acknowledged this and mass exercise classes can be seen in many of the major employers of Japan and China.

Another point for consideration is why older individuals do not take up the offers of learning opportunities they receive. Here the research suggests that this is either because of fear on one hand or over confidence on the other. Fear because they think they can't learn new concepts and tasks and over confidence because they don't see a need for training in a job they know well (Newton et. al. 2006). I think that parallels can be drawn with older adults engaging in exercise and fitness activities. Many individuals fear the environment where exercise and fitness is taught for example the gym and can fear making a fool of themselves in this situation. Over confidence can be seen in the increasing number of cardiovascular problems, obesity and other health

related conditions associated with lack of exercise that are prevalent within this population group. Newton et.al.(2006) also argues that this lack of uptake of training opportunities may also relate to the type and quality of training offered and once you have done, or even heard about the type of training offered you may decide that it's not worth the time or effort involved in doing it. Hiemstra (2002) argues that 'a person receiving a piece of information incorporates that datum through his or her own eyes, knowledge limitations, and experience base. Thus, what a teacher might perceive as the important point on some topic might be perceived quite differently by the learner. Consequently, teacher training efforts must be aimed at more than the development of information transmittal skills'.

According to the HSBC and Bond (2005) study, retirement is now viewed more as a 'time of opportunity and reinvention' instead of 'rest and relaxation'. Their study across ten countries and regions found very varied differences to ageing and older people. In addition there has been a rejection of a mandatory retirement age or rules by government or companies to stop older people working if they were able and willing to work. The HSBC study found that in the UK the view of retirement age was that it was about 'self reliance, flexibility and part-time work'. They tended to rely neither on government nor family to support them and planned to continue to work part-time in a flexible job.

Research Methodology

Thesis or Hypothesis

One of the things that I wanted to explore in this report was what factors are involved in getting older people to participate in regular exercise and what the perceived barriers to engagement might be. I also wanted to examine if teaching and learning changes with the age of students and what strategies can be employed by the teacher, in an exercise environment, to motivate and help students learn. Are any particular strategies more effective than others and if so what are the best strategies to use when teaching older adults exercise and fitness?

Research approach

The strategy that I focused on in this project was qualitative research. The reason for the choice of this research method was to gain a thick descriptive narrative (Geertz 1973) and although narrow in sample size there was a rich depth of information. I thought that this would be the most appropriate method for gaining the data needed in this project. This method gathered detailed information that proved useful for the project and I believe that information could not have been gathered from a quantitative survey. I ensured that the sample was representative for the research to be significant (Cohen, Manion and Morrison, 2000). The interview questions were piloted before embarking on the main body of work. The pilot responders' feedback was invaluable in strengthening and improving the questions and how they worked.

A number of data collection techniques were included in this project. 'One of the strengths of this approach is that it allows the researcher to use a variety of sources, a variety of types of data and a variety of research methods as part of the investigation' (Denscombe 1998 p31). This multiple method of capturing data facilitates the validation of the data through triangulation.

Data collection method

The data collection methods that I used included;

Desk based research

I started by doing desk based research to find out just what has been written in this area. This is the basis of my literature review. Desk based research added an additional dimension to the empirical research. It proved useful to compare and contrast any similar findings of other researchers with my findings. Whilst the theme of this research was to identify models of good practice and innovation within teaching and learning of older adult, links with other producers of good practice and innovation were also sought.

Literature search

A detailed literature search and review was undertaken. After undertaking this search I was able to establish the existing state of knowledge and identify any 'obvious gaps in the current state of knowledge' (Denscombe 1998 p158). This search and review also furthered my understanding and knowledge in this area.

Qualitative interviews

After the literature search and review I then went on to gather qualitative data. This was gained by interviewing teachers who work with older persons in an exercise setting. This gave me their perspective, knowledge and experience and an understanding of their strategies for teaching older people. I then undertook a focus group of older people (potential students) to find what it is like to be on the 'receiving end' and also gain their view on participation. This added an additional dimension to the project as I got the perspective from a lay-persons point of view rather than just the teaching professional.

Semi-structured qualitative interviews with these key people were done for this research. Face to face interviews were carried out and although I had planned to use the telephone as a back up this proved unnecessary. This type of data collection provided me with the detailed information needed for this project. I tried to keep the interviews fairly short aiming for approximately 20 – 30 minutes each and all interviews were audio recorded and transcribed.

The key people with whom I conducted semi-structured qualitative interviews were,

- Teachers of exercise to older persons.

For this part of the data collection I recruited four teachers of exercise to older people. I travelled to a suitable venue for the interviews with these four teachers and explained the context of the research to them to ensure their willingness to

participate. The interviews were recorded onto audiotape and at a later stage these were fully transcribed.

The four teachers of exercise who volunteered to be part of this project were;

(AM)

(FS)

(EB)

(JP)

The age of the teachers was between 29 and 70 with a mix of two female and two male. Ethnicity of these respondents was white. I kept the identities of the volunteer teachers confidential and will refer to them with their initials.

A list of questions asked during these interviews is available in appendix 1.

Focus groups/group interviews

A group interview/focus group was also arranged. I kept this group to a maximum of six people, which was easier, both to manage and transcribe than the group of twelve that I used in my earlier MSc research. I found that this method was both time consuming and therefore expensive, although, It did produce some very interesting findings.

My choice of focus group was governed by the value of the interaction within the group. It was an ideal means for eliciting information from the collective rather than the aggregate view (Bell 1993). The reason that I have included

these focus groups is to widen the qualitative net to ensure that salient points were not overlooked. I chose to do a focus group with older students so as to find the answers to some of the questions raised by this research. In the previous MTeach module Leading Learning I did some narrative work with older students and this provided a rich source of data. This was also true of this piece of research.

A focus group was organised with the Vassall Elderly Group. This is a local community group that meets weekly in Lambeth south London. The choice of this group of older people was that I had easy access to them. A focus group session was arranged at a time and location to suit the participants. Interviews were recorded onto audio tape and transcribed at a later stage. Six participants volunteered for the focus group interview they were all women and self declaration of ethnicity ranged from Black West Indian, English, Irish and Asian. The age range of these participants was 77 – 85 years old. I kept the identities of these respondents confidential and are referred to in the later findings as FG1, FG2 etc.

A list of questions asked at this focus group can be found in appendix 2.

Observation

I attended many classes of exercise for the older person to try to access the teaching strategies and methods used by the various teachers of exercise as they actually taught it. I joined in the class as a participant to try to be as unobtrusive as possible. Although this did elicit favorable results because the

dynamics of the teaching and learning during the class being kept as natural as possible, the drawback to this technique meant that I was not able to take notes during the class and had to rely on memory for the information gathered. I made notes at the end of the class to ensure that the salient points were recorded.

Data Analysis

As all of the data collected was of a qualitative nature, the use of statistical packages like SPSS (Statistical Package for the Social Sciences) was not useful in the analysis of the data collected. Rather, I sought patterning in the responses and looked for casual pathways and connections, Mile and Huberman (1984) cited in Cohen, Manion and Morrison. (2000). I hoped that theory and methods of teaching would emerge during the course of the research (what Gasser and Strauss (1967) call 'grounded theory'. The emphasis was on discovery of teaching methods or strategies rather than proof Maykut and Morehouse (1994). I read the transcripts many times and colour coded significant themes and patterns which emerged for ease of interpretation.

Timescale

Timeline	Activity
July – September 2007	literature search and review
October – December 2007	data collection
January – April 2008	data analysis
June 2008 onwards	writing of the report

Expected gains

I have gained a better understanding of the teaching and learning process as it changes over the life course and which teaching techniques best serve the older learner. This will impact on my teaching and may also have an impact on the teaching of some of my colleagues who work in this area.

Problems

Some of the problems that I envisaged in the piece of research included;

- Would I have I enough time? In previous research that I have undertaken I became aware of the time implications in transcribing interviews and analysing them. In reality, time was short but I was able to fit all the extra work into my busy teaching schedule.
- Would people engage with the research process? Most people are very busy and finding suitable and willing participants could prove difficult. However, people seemed all too willing to engage in the research process and I had no shortage of research volunteers.
- This type of data collection could be quite artificial and could lead participants to give answers that they believed I wanted to get. In reality this is really hard to judge. However, I do believe that the answers to my questions were answered honestly by the respondents and that all participants understood and believed in the research.
- Cost considerations.

Ethical considerations

In doing this research I did not want to coerce people into participating, rather involve them willingly. I treated all participants fairly, respecting their contributions and thanked them for their input and time committed. The true nature of the research project was explained to the respondents and permission sought with anonymity guaranteed. Parental consent was not an issue as all participants were over 18 years of age. The final work will be made available to all participants. Consent forms for the use of transcribed interviews were used and verbal consent sought and potential publication explained to the respondents.

Positionality

My position within this research was as a middle aged, white, gay man. This power dynamic was given full consideration when data was gathered. The consequence of the influences present on my combined role as the researcher and teacher, and how these may impact on the research was considered. Some respondents may have furnished the answers that they think that I wanted to hear rather than their views or opinions. My positionality within the research process was constantly questioned and stringent processes of reliability, validity and generalisability were put in place. The problem of respondents 'seeking to please' the researcher were dealt with by respondent numbers and the use of triangulation. Some of the respondents were black, so being white, could impact on the research. I was always aware of the cultural differences and values that people of differing social and cultural backgrounds brought to the research and was conscious that communication on this level could inevitably be problematic.

Care was taken not to confuse these issues with the subject of the research.

Being inside the research will have some impact on my construct of the research and care was taken to keep as independent a view as possible.

Who is the audience?

The likely audience for the research project will be the academic process at the Institute of Education and me in the first case. I then hope to cascade my findings into the fitness industry by writing short articles for professional magazines within the industry. These will be aimed at teachers, trainers and tutors working in gyms, leisure centres and health clubs. Colleges and training organisations will also be targeted when I try to get articles published in educational magazines. I will also publish the full text on my website and try to get other key fitness education websites to also publish the findings. I am currently in the process of writing the new level three qualifications for OCR and whilst Exercise and the Older Person is one of the key areas for these qualifications it is not planned to include it in the first round of the launch, and is aimed to be released early/mid 2009. This should give me the timeframe to finish this project which may have some influence on the syllabus of this module which is planned for later release. The importance of the older adult within this industry is obviously apparent. As the 'baby boomers' reach retirement age they will be the industries clients who will fill gyms during the day when many economically active people will be working. I hope that the findings of this piece of research will go some way to help those working with this group.

Research Findings and Analysis

Barriers to participation

One of the things that I wanted to find out from this research was the perceived or real barriers to participation in regular exercise classes by older individuals. I found that one of the major barriers to participation was that of transport to the venue. This was bourn out by Chodzko-Zajko found in Jones and Rose (2005) who reported that 'many neighbourhoods and communities were badly planned, unsafe, and designed in a manner that discourages regular physical activity by older adults'. Many older people feel isolated and lack transportation to exercise venues this was highlighted by the responses of the teachers that I interviewed,

One of the barriers is transport, it can also be the cost of the exercise session, it can sometimes be the timing of the class for example it may be too late for them to go out at night particularly if it is not a safe area but mostly it is the transport.
(FS)

The locality of the facilities is a really important factor because they are not as able to get to places as younger people are they may have mobility problems. They have to rely on 'Dial a Ride' which are absolute rubbish at the moment. Due to lack of funding everyone is turning up to the classes late. (AM)

As with Chodzko-Zajko's research, tutors in this survey also found that some of the built environments were not best suited to access by the older individuals.

The environment is important too especially if older people cannot access the building. There should not be too many stairs to climb to get into the building and there can be problems if there is no lift, these are the major barriers that will cause problems that put people off coming to the centres where the classes are held. (AM)

If we really do want to change older people's lifestyle to include participation in regular exercise then transport to suitable venues must be made available. Alternatively, participation in regular walking activities is an excellent form of cardiovascular exercise for the older individual and is recommended for the over 60's age group by the American Council on Exercise (Sudy 1991). In warmer weather regular walking groups could be encouraged under the guidance of a suitably qualified personal trainer. In winter these walking activities could be encouraged in warmer environments for example shopping centres which seem very suitable environments for this type of activity. The valuable social aspect of this type of group exercise class could be enhanced by including a healthy lunch at one of the eateries in the centre.

One of the biggest barriers to participation in exercise classes is time. Two-thirds of those who want to exercise more say that lack of time is one of the main problems. (Murray 2006). This reason was cited as one of the main factors to none participation in regular exercise.

I have not got the time I am too busy (FG 2)

There is not enough time in the day to do anything because I am so busy (FG 5)

It would have to be a special day every week if I was going to attend (FG 4)

This argument of being 'too busy' is something of an excuse. If people had more enthusiasm they would prioritise exercise and find the time. However, strategies aimed at increasing people's participation levels need to address this barrier and help remove this reason.

Murray (2006) argues that strategies to increase activity levels might therefore be best focused on providing advice on how to fit activity around daily routines - including how to exercise at home. Non-competitive activities, rather than sports, are more likely to appeal to women and older clients and this should be borne in mind in campaigns and initiatives to increase participation.

Economics was another contributing factor to the lack of participation in exercise classes. Older individuals many of whom are reliant on just the state pension as an only income are unable to afford the cost of joining in exercise classes. Given the current economic climate in which the price of food, gas, electricity and fuel has all increased drastically, exercise is seen by many as a luxury rather than a necessity.

Money is also a massive factor i.e. being able to afford to attend classes. At the centre where I work we have a concession rate but even this is difficult for some of them to afford as many are surviving on just a state pension. So I would say that the prime factor is money. (AM)

One of the barriers..... can also be the cost of the exercise session.....and the cost implications to attend a class. (FS)

Members of the focus group also stated that money was a contributing barrier to the attendance in classes.

You often find the class that you want to do is not a free class. Morley College (the local adult education provider) had some very good classes but they are quite expensive now. I was quite interested in needlework and making clothes but, there are not the places where you can go and get a free classes, this is the thing. (FG 1)

Whilst there is no easy solution to funding of any adult education classes, creative approaches to encourage older individuals to participate in regular exercise need to be forthcoming. Given the health benefits and ultimately cost savings to the National Health Service associated with a healthy lifestyle, different funding streams other than the education budget could be used to finance participation. Exercise in the home using everyday items as equipment for example cans of beans used as weights, a chair used as support for balance exercises, should also be promoted. I also advocate the use of television and other media formats as an invaluable tool in promoting this initiative and this is explained in a later chapter.

Learning styles, teaching strategies and motivation

I wanted to look at learning styles and find out if there were differences between younger and older groups. However, with this small group and no younger people in the survey to compare the finding with this proved to be a little ambitious for this project. I wanted to get the respondent's thoughts on how they learned. I asked the focus group what and how were some of the things that they learned recently. Most answered that they got help from family and friends when they needed to use or learn something that they did not understand.

I was shown by my husband but I still cannot work it. (FG 6)

My granddaughter taught me, one day she just put it in, she showed me and that was it. (FG 2)

My four year old grandson taught me how to use a video. He showed me how to use a video. I couldn't believe it the children grow up with it. (FG 5)

I was interested in these responses and wondered, if family or friends were not available to offer advice then were there other methods of learning? I asked if any of the respondents used a manual or instruction book to solve problems as this could have implications for the teacher when using handouts or readings in classes.

Yes, but it did not make a lot of sense to me. I couldn't make head or tail of it. Laughs. (FG 2)

I find the print a little hard to read. (FG 5)

Having someone to ask advice from or help in finding a solution was one of the main factors in learning for the respondents. This can be directly compared to a more formal educational environment where tutors can organise the group, share information, structure the learning, help overcome any barriers to the learning process and provide assistance to students in need.

The use of handouts was not seen by the teachers interviewed as being a very useful teaching method in the exercise and fitness environment. Other strategies were found to be more effective and these are discussed later.

However, when using handouts the tutors came up with some useful tips to help them work more effectively.

Q Do you ever use any handouts?

Not very often but if I do I tend to use big pictures and use individual teaching and safety points for what someone may or may not need. This helps with their memory which is sometimes not all that great. (AM)

Q When using handouts what strategies do you use to ensure that they are effective?

Pictures, I always use pictures where ever I can. These can be very useful. For example if you write down 'lay on the floor' this would not tell the client where you want them to lay which way they should be facing, should they be prone or supine. I like to use clear and concise bullet points. I do not go into detail at all rather keep it very simple. (AM)

If there is a necessity to memorise anything I will give out resource/workbook. (JP)

I also asked members of the focus group about written handouts and learning materials.

(Not being able to read small print)... is true for everybody who comes becomes elderly, anything which is done in smaller print elderly people would have a problem reading it. It also needs to be nice and clear. (FG 1)

A clear message that came from the respondents in this research was that if a teacher is going to use any written words then they must have an absolutely clear understanding and use a large font size. Large print is defined as that which is 14 point or above in size and is one of the simplest ways of increasing accessibility for students with a visual impairment (University of Cambridge 2008). The use of pictures to clearly demonstrate what is required is another useful teaching aid.

I was also interested in the teaching strategies that the teacher of older persons used and how these may be different from the strategies used when teaching younger people.

I think that you must always make them laugh, humour always works. I think that you should also entertain them.

I try to gain their confidence to make them feel safe.

I try not to treat them as numskulls.

Try to make it as enjoyable as possible.

I start off with a few sentences and an introduction at the start of a class and always encourage the participants to only do what they feel they can cope with.

When we do the floor work and get them onto the ground I do this very slowly so as to avoid them panicking.

I try to make it as fun as possible for the participants.

They will start off by trying to weigh you up and will probably have the attitude 'I'll not do anything'.

Then they will join in – I like to ease them in gently.

Music is very important; you must always use the right sort of music.

I try to make them feel that they are still in the world and that they are doing something for their health.

When choosing music I try to imagine what age they would have been when a certain piece of music was popular.

I also think that their own children's music is very important as this will have had a big influence on them even though it is not music of their 'generation'.

Try not to take the credibility of what you want to do away.

I like to keep the choreography simple I will check the lesson plan regularly and always plan the session.

After a class I always reflect on it.

I think that it is important not to overload any one particular area. (EB)

You cannot have preconceived ideas about this group because people react differently so any preconceived ideas will go out of the window. You do need to have some ideas for how you are going to teach the class you will need to adapt these ideas to meet the needs of the class on any one particular day even the weather can change everything about your class. You need to be able to adapt your ideas as quickly as possible during the class. You need to make sure that the client is comfortable keep an eye on what they are doing. Even if they cannot do the full range of movement I always try to encourage participants to do something. With younger people they tend to follow your instructions immediately whereas the older people watch you first. I also like to try to change the tonality of my voice. I like to

give clear demonstrations so for older people I would do the demo before the clients tried the exercise so that they know what they are expected to do. When working with older clients I find I sometimes have to demonstrate the exercise more than once or change my teaching position or my angle in the room or go one to one even in a class format. (FS)

I do everything very slowly and gradually. I offer many more alternative exercises than I do when I am teaching younger people. I do not use floor based exercises and rather use a ball for any MS&E exercises. I very, very rarely use floor-work unless I have got a group of people who I deem to be very able rather than what is the norm in a cardiac rehab group which is some are able and others are not. I try not to split them up too much.

I really think that I leaned this strategy by trial and error. Also what I find is that it is really good to pair them up once you have seen who has built a rapport particularly if one of the pair is slightly older if I pair these people up they usually get on very well. (AM)

Q How do you think that older peoples learning styles vary from that of younger peoples?

First of all their co-ordination and their motor skills are not as quick as a younger persons may be, they are kind of slower but, once that they have learned it they seem to retain it much better than any of the younger people who I have worked with or that I have trained. Once they have learned it, it is like it is written in stone they tend not to forget it. Whereas, younger people their technique laxes now and again as they go a little bit too quickly.
(AM)

I recognise the student as a resource and I focus on students really understanding. I think that students should really understand at the moment of presentation. In my classes there is no necessity to memorise anything and if that is necessary then I will give out a resource or a workbook. (JP)

Although many of these strategies would be seen as good practice when teaching any group of individuals the responses from the above tutors do give a flavour of the range of tactics that really work when teaching exercise and fitness to older adults. A full list of these teaching strategies can be found in the later part of this paper.

Keeping participants motivated and attending classes regularly is an issue for all teachers. This can be a real problem for the exercise and fitness tutor and I wanted to find out if the teachers had any strategies for motivating their students.

I try to build up their confidence over the weeks. (EB)

I speak to all of them on a one to one basis, I also pair them up with like minded people or people of a similar strength or who have similar conditions for example knee or back problems.

This allows me to target them and each week I can note progress and increase intensity if called for. This helps me target individuals whilst still teaching in a group environment.

(AM)

They are also offering a good deal on the health club membership where I work. It is £11.95 per month for the over 60's or people referred by their GP, this means that they will be able to keep up their exercising long term. In some clubs when their 10 weeks GP referral sessions come to an end and they have got to start paying full rate membership they tend to drop off. I also try to offer lots of things that they can do at home. I try to offer adaptations so that they can do exercises on their beds. You must always be aware that many of the participants will suffer from high blood pressure so you should avoid things like static contractions and things like that. Try to get them to move a little more rather than giving them specific exercises. Make it fun. Keep the muscles alive rather than trying to push them to a certain level of exertion. (AM)

I try to help them to visualise, like at the moment there is going to be the Olympics in 2012 I always make a joke that we will participate in the 2012 games. I remind them of their goals. I stress the importance of exercise and how it can make you feel good. I get them to visualise their goals and where they would like to be in six months from now. I try to push them to work a little harder. I get them to visualise their family perhaps their grandchildren and how they would like to play with them. I reinforce that if they improve their level of fitness they will improve their levels of energy. I also encourage the ADL (active daily life), by going shopping or a walk to the library or by doing exercise regularly they will be able to cope with the demands of everyday life more comfortably. (FS)

Make it relevant to their life, personal/philosophical. Link it to their life experience. (JP)

The findings in this research are similar to other research carried out regarding exercise adherence. The tutors interviewed gave some very useful tips for encouraging adherence. This can be complemented by reinforcing the message that exercise can add several years to the expected lifespan and importantly, it improves the participant's quality of life. As an older person, participation in regular exercise can help maintain independence, mobility, memory, improve recovery from sickness and relieves symptoms of chronic ailments like arthritis. Partnership working with the health care professionals could also be a

motivating factor in motivating individuals to attend regular classes. A study published in the *American Journal of Preventive Medicine* by Walsh (1999) found that primary care doctors can be a significant motivating tool for their patients. The researchers deem the results show that precise, clear instructions from their doctor can help motivate patients.

The use of music in an exercise class can be both motivating and a source of annoyance for some. As its use is prime factor in many exercise classes I wanted to find out if any of the teachers interviewed had advice for other tutors in picking suitable music for the older person to exercise to.

When choosing music I try to imagine what age they would have been when a certain piece of music was popular. I also think that their own children's music is very important as this will have had a big influence on them even though it is not music of their generation. (EB)

I keep the volume of the music very low because people need to hear you. Sometimes the music can be a distraction and participants loose their concentration. I try to use relaxing music just to give an atmosphere, not very loud with a low tone because people need to listen to your instructions. (AM)

I sometimes use Yoga or Pilates music or sometimes I will use older music i.e. the 60's music I find that some of my class

members like this sort of music. Sometimes I encourage them to sing along as well but generally I use very low music without a beat. (FS)

Research findings suggest that the use of music to an exercise routine can allow an individual to carry on exercising with a greater efficiency (Carr, Elliott and Savage 2004). A person can increase workload or time to exhaustion with the use of music. Despite a lack of understanding of the exact mechanism of this phenomenon, music can act as a motivator for individuals, helping to distract them from uncomfortable physical sensations of exercise (Kravitz 1994). Choosing the correct music in an exercise class is paramount to its success and it is very consistent in the research that individuals enjoy the exercise regimen much more when the music is motivating to them (Atkinson, 2004).

Tutor rewards and enjoyment

One of the overwhelming findings of this research is just how enjoyable and rewarding teaching older people can be. All of the tutors that I interviewed expressed this view. Tutors reported that teaching an older age group class was sometimes easier than teaching a younger group.

I thought that possibly they would be a bit more hard work than the younger groups, which actually they are not. In fact they are a little bit easier to work with than teaching younger people. As I

said I do tend to pair them up which seems to work really well. They listen very carefully to everything that you say to them. They listen to the intricate teaching and safety points for example elbows into the body, keep the joints soft and do the exercises nice and slow. Younger people, when taught this it tends to go completely over their head. (AM)

Younger people have not got the experience of older people younger people act on instinct and try to do more than what is expected whereas older people listen and follow your instruction more carefully and they follow your instruction with more detailed functions. (FS)

They will surprise you. (EB)

Enjoyment of a class is the positive attribute of student emotion as well as the key factor that relates to teaching effectiveness and although teaching style is one of the valuable aspects of pedagogical inquiry, its relationship with student enjoyment has not been given enough attention by researchers and this is an area for further research (Cai 1998). Teachers enjoyed their work most when their interactions with students gave them a feeling of competency in dealing with the demands of the teaching activity (Plihal 1981). Research has also found that there is a direct and positive correlation between what a student achieves and a teacher's enjoyment (Adams & Bailey, 1989; Doyle & Forsyth,

1973; Goodman, 1980; Stanton, 1974). Given the poor pay many educators receive for their work this is an important finding in this research.

Conclusion

The intention of this report was to explore some of the teaching strategies that are used by the teacher of exercise to seniors. I also wanted to understand the barriers both perceived and real, that the older learner faces when deciding to embark on a series of exercise and fitness classes.

The main perceived barrier to participation in regular exercise is cited as lack of time. An education campaign alerting the older population to the benefits of regular exercise needs to be implemented sooner rather than later. The excuse of lack of time needs to be addressed. If I can use an analogy of regular teeth cleaning I feel sure that many years ago the need for regular dental hygiene was not seen as a priority for much of the population. However, few people would miss their regular teeth cleaning now. Perhaps a campaign akin to that of dental hygiene and tooth decay needs to be implemented very soon. A reminder may be in order to point out the numbers of people who have died from bad teeth compared with the numbers for Cardio-Vascular disease, Obesity, Diabetes and Strokes.

Perhaps we could find another way to promote exercise and fitness to the general public? I think that a television channel similar to Teacher's Television which concentrates solely on teaching the benefits of exercise and fitness may have a place in the already diverse broadcast media. Given the huge amounts of money that Obesity, Heart Disease, Diabetes and Strokes cost the National Health Service every year, many of which are preventable, perhaps it is time

that more preventative measures were implemented to complement the work being done in curing these illnesses. A more formal partnership between the health service and fitness educators need to be put into action to ensure that the work of both parties enhance and complement the others.

One other perceived barrier to joining an exercise class is gender. If the class consists of more women than men then it can be perceived as a female exercise format and inclusion found to be off putting by many men and visa-versa. An example of this is the traditional aerobic class which is seen by many as being a female exercise format. On the other hand exercise formats like circuits or boot camp which traditionally attracts more male attendees are seen as male exercise formats which again can be off putting to the female attendee. My recommendations for exercise class information is to try to be as clear and honest in what the participant should expect from the class and what the expected gains will be.

I was keen to learn of the different teaching strategies that are implemented by the teachers who volunteered to be part of this research project. Many interesting and useful approaches emerged. These will prove very useful for other teachers planning to enter this area of teaching.

The teaching strategies that emerged from this piece of research included (in no particular order of relevance);

- the use of humour

- try to make it fun
- gaining a clients confidence and making them feel safe
- build up a clients confidence over the weeks
- make it an enjoyable experience
- select music that the client group can relate to and motivates them
- reflection after a class
- keep the choreography simple
- not to overload any particular area for example muscle or muscle group
- adapt your ideas as quickly as possible during the class to meet the clients needs
- the need to make sure that the client is comfortable
- keep an eye on what the students are doing
- clear demonstrations
- try to change the tonality of voice
- change teaching position or teaching angle in the room to observe and correct
- go one to one even in a class format
- do not have preconceived ideas about this group
- pace the class slowly and gradually
- offer many more alternative exercises
- due care and attention when offering floor based exercises or offer standing or sitting alternatives
- due care when pairing people up for duo exercises
- recognise the student as a resource

- focus on students really understanding
- understanding by the student at the moment of presentation
- no necessity to memorise anything and if that is necessary then give out a resource or a workbook
- make it relevant to their life, personal/philosophical
- link the class to their life experience
- pictures to clearly demonstrate if using handouts
- large font on handouts (14 plus)

Whilst many of these teaching strategies would be used for teaching any exercise class they can be seen as a resource list of good practice for teaching an older group exercise and fitness classes. Have I found anything that is different in teaching older people that would not be similar to teaching a younger group? I do not think that I have. Teaching older people is similar to teaching younger individuals, I do not think that radical teaching strategies need to be implemented until the clients suffer from progressive neurological disorders that result in impairment of mental function. When this is the case, for example the loss of hearing, sight, onset of Parkinson's, Alzheimer's disease or multiple disabilities that interact with each other then teaching and learning strategies will need to be modified to meet the demands of this client group. Whilst I have not sought to examine teaching and learning in this population group this is an area for further research.

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Appendices

Appendix 1 - List of questions asked to teachers

- Q1 Thinking about older people (50 plus) what strategies do you use when teaching this group?
- Q2 How do you push the clients?
- Q3 How do you feel it is different teaching older people rather than younger people?
- Q4 How did you learn these strategies?
- Q5 How do you change your instruction methods when dealing with younger or older people?
- Q6 How do you think that older peoples learning styles vary from that of younger people?
- Q7 The older group that you are currently teaching are a cardiac rehabilitation group. When you first started teaching this older group did you have any preconceived ideas of how this group may be? Did any of those preconceived ideas turn out to be incorrect?
- Q8 Why do you think people come to your classes?
- Q9 What are the barriers to this group attending classes?
- Q10 What long term strategies do you use to keep people coming to your class and how do you keep people motivated?
- Q11 What advise would you give to someone who was thinking about teaching an older group?
- Q12 Do you use music in your classes, if so what type of music do you use?
- Q13 Do you ever use any handouts?
- Q14 When using handouts what strategies do you use to ensure that they are effective?

Appendix 2 - List of questions asked at the focus group

- Q1 We all know that physical activity and keep fit are very healthy and good for us, do you attend any keep fit classes?
- Q2 Why wouldn't you attend a keep fit class?
- Q3 Tell me about your keep fit class that you attend
- Q4 Would you prefer a teacher who is older?
- Q5 Do you attend any other educational classes for example Adult Education Classes?
- Q6 Why Not?
- Q7 Why do you think that you are too old?
- Q8 Does any one else think that they are too old to go to classes?
- Q9 What would be some of the barriers that could be lifted to help you attend education classes so that you would come to classes?
- Q10 Have you got access to the World Wide Web, the internet or a computer?
- Q11 How do you learn new things? For example when the video recorder came out how did you learn to use it?
- Q12 Does anyone use a manual?
- Q13 Do you find the print in a lot of these manuals etc. is hard to read?