



KEEP DANCING . . .

The health and well-being benefits
of dance for older people

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ABOUT BUPA CARE SERVICES

- Bupa cares for over 18,500 people in the UK.
- We have over 300 care homes in the UK which provide specialist care to some of the country's oldest and most vulnerable people.
- Over 70% of our UK care homes residents receive some form of state funding.
- Bupa has extensive international experience and also operates care homes in Australia, New Zealand and Spain.



Data sources

Research for this report was carried out for Bupa by the Centre for Policy on Ageing

INTRODUCTION

The older population in many parts of the world is growing rapidly and, at the same time, it is becoming more diverse. Recent projections suggest that, in England and Wales alone, by 2026 there will be over 10 million people aged 65 and over, of whom 1.3 million will be from black and minority ethnic groups. As people age they tend to adopt an increasingly sedentary lifestyle but there is widespread and compelling evidence that increased levels of physical activity will improve both the longevity and the health of older people.¹ This report reviews the international evidence for the health benefits of dancing for older people.

Exercise programmes for older people commonly experience high drop-out rates. Dance, on the other hand, is an enjoyable and sociable form of exercise where participants report very high levels of motivation.²

Dance is also increasingly catching the public imagination. In 2010 over 10 million viewers tuned in to watch episodes of the BBC1 TV programme *Strictly Come Dancing*. This increased interest in dance provides an opportunity to offer dance sessions for older people in community centres, care homes, village halls and hospitals across the country.

Local dance projects for older people have been set up in many parts of the UK. Similar programmes of dance, including ethnic dance, for older people, have been adopted worldwide including recreational dance in Australia.³

There are a number of benefits to dance for older people:

- dance is inclusive and one of the principles of community dance for older people is that anyone and everyone can take part;⁴
- dance can be tailored to match the physical capabilities of an older person and dance can also reflect the cultural diversity of the older population; and
- dance is a social activity and, as such, can benefit both the physical health of older people and promote a sense of well-being and social inclusion.

¹ Lievesley, 2010; Health Survey for England, 2008

² Nordin and Hardy, 2009

³ Connor, 2000

⁴ Houston, 2005

“Dancing makes you feel alive, almost like you’re young again...”

I don’t know anything else that can have that effect on you...

Maybe it’s the music, the people... I don’t know...”

- Young@Heart participant, 2009

EXECUTIVE SUMMARY AND KEY FINDINGS

This report identifies a number of issues around exercise for older people and draws together the key health benefits of dance for older people. These benefits can promote both physical and emotional wellbeing.

Older people don't get enough exercise

- Only 20% of men and 17% women aged 65-74 get the recommended levels of physical exercise.
- For people aged over 75 this falls to 9% for men and 6% for women.

This lack of exercise matters because taking part in physical activity improves both health and life expectancy

- Regular physical activity by older people reduces the occurrence of a number of chronic conditions including cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis.
- Older people who engage in physical activity live longer and those who carry out more intense physical activity for longer periods live longest on average.

Dance benefits the body and the mind

- Dance is a good source of aerobic exercise and a well-designed dance session can also provide low-level resistance exercise.
- Dance has physical health benefits including improvements in balance, strength and gait, which help reduce the risk of falls, a significant health hazard in later life.
- Dance has been shown to be beneficial in the direct treatment of a number of conditions including arthritis, Parkinson's disease, dementia and depression. Taking part in ballroom dancing has been shown to reduce the chances of getting dementia by 76%.
- Taking part in dance also improves the mental health of older people including reaction times and cognitive performance.

Dance promotes emotional wellbeing of older people and combats isolation

- Older people enjoy dance sessions and are more likely to continue to attend them - thereby gaining proportionately more physical benefits than they would from ordinary exercise sessions.
- The social aspects of dance help to overcome feelings of social isolation and depression.
- Dance is inclusive - there no targets, and no failures, which contrasts with the philosophy of sports-based activities.

This report shows that there is considerable and emerging evidence of the benefits of dance as an exercise option for older people. However, too often policy makers in Government and beyond are overlooking the contribution dance can make to the welfare of older people, often concentrating on less inclusive exercise and sports-based activities.

Bupa calls on policy makers to pay more attention to dance.

We believe that supporting organisations that provide dance activities for older people in the community, in care homes and hospitals, can make a major contribution to better physical and mental wellbeing of the growing numbers of older people in the population.

THE IMPORTANCE OF PHYSICAL ACTIVITY IN OLDER AGE

Physical activity may be defined as 'any movement by skeletal muscles resulting in energy expenditure'. Exercise is a particular form of physical activity which is characterized by 'structured and repetitive bodily movement done to maintain one or more components of physical fitness'.⁵ With the addition of music and removal of any assumptions about the purpose of the activity, this definition of exercise as 'structured and repetitive bodily movement' sounds very much like dance.

Physical activity in older age improves the health, quality and length of life for older people. Older people who carry out more intense physical activity for longer periods live longest on average.

A study of 1,449 older people aged 75-84, with a seven-year follow up, reported in 2010 that, taking into account the effect of socio-economic and psychosocial factors such as body-mass index, smoking, marital status, ill health and frequency of contact with others, increased levels of both duration and intensity of physical activity had a significant improving effect on mortality.⁶

These results confirm other findings of the effects of physical activity on mortality for all adults, including older men and women over the age of 75.⁷

Being physically active reduces the risk of all-cause mortality. The largest benefits are found from moving from no activity to low levels of activity, but even at high levels of activity there are benefits. Increasing physical activity from low levels to the recommended level of 30 minutes per day, five days per week, (2.5 hours per week) of moderate activity reduces mortality by 19% while an increase to one hour every day (7 hours per week) increases the benefit to 24%.⁸

Regular physical activity has also been shown to be beneficial in the prevention of chronic conditions such as cardiovascular disease. A 2006 Canadian study confirmed that "there is irrefutable evidence of the effectiveness of regular physical activity in the primary and secondary prevention of severe chronic diseases such as cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis".⁹

Despite the clear evidence of the efficacy of physical activity, levels of physical activity are generally well below recommended levels for all people aged 16 and over. In England levels of physical activity decline consistently from age 16 onwards for men while for women, after initially holding steady, albeit at a lower level than for men, decline from age 45.

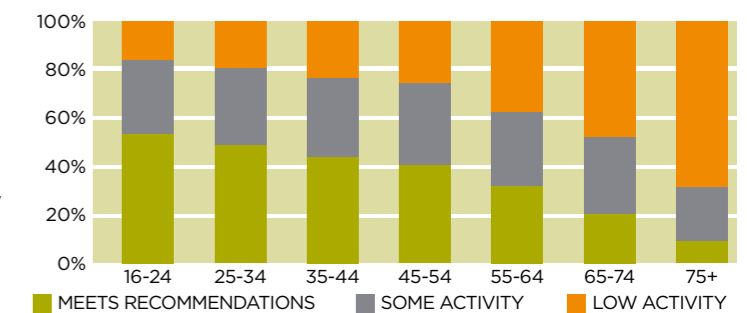
The Health Survey for England, 2008, measuring self-reported physical activity, found that just 39% of men and 29% of women met recommended physical activity levels of 30 minutes or more of moderate or vigorous activity on at least 20 occasions in the previous four weeks (equivalent to five days per week). This declines to 20% for men aged 65-74 (9% for men aged 75 and over) and 17% for women aged 65-74 (6% for women aged 75 and over).

The Scottish Health Survey, 2008, recording physical activity session of 10 minutes or more, found that the majority (over 50%) of men and women in Scotland fail to meet recommended levels of physical activity while the Welsh Health Survey, 2008 found that, in Wales, only 30% of adults meet recommended levels.

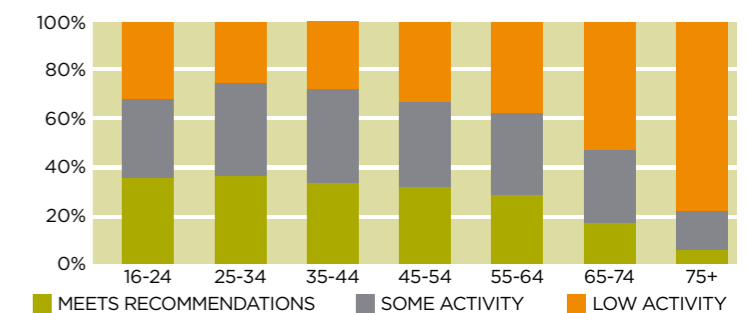
The Health Survey for England also fitted accelerometers to respondents to compare actual physical activity with reported physical activity and found that respondents generally tend to over-report their actual levels of physical activity but that the greater levels of moderate or vigorous physical activity found in men and the decline in physical activity with age continue to hold true.

HEALTH SURVEY FOR ENGLAND 2008

Physical activity by age group - Men



Physical activity by age group - Women



Note:

Health Survey for England, 2008 n= 6,737 (men) n= 8,317 (women)

Meets recommendations: 30 minutes or more of moderate or vigorous activity on at least 20 occasions in the last four weeks (equivalent to at least five days per week)

Some activity: 30 minutes or more of moderate or vigorous activity on 4 to 19 occasions (one to four days per week)

Low activity: 30 minutes or more of moderate or vigorous activity on fewer than 4 occasions (less than once per week on average) Episodes of activity of less than 30 minutes have been excluded.

⁵ Cherubini, 1998

⁶ Hrobonova et al, 2010

⁷ Woodcock et al, 2011

⁸ Woodcock et al, 2011

⁹ Warburton et al, 2006

DANCE AS EXERCISE

Dancing can take many forms. Most forms of dance will provide the opportunity for aerobic exercise - exercise that requires more than the usual day-to-day levels of exertion and causes increased heart and breathing rates thus enhancing the body's ability to take in, transport and use oxygen.

Contemporary dance and some other forms of dance may, as well, allow the opportunity for some low-level resistance exercise - exercise that causes individual muscles to work against some form of resistance thereby increasing muscular strength. According to researchers "it has been observed that dance-based aerobic exercise can improve the balance capacity, as well as the walking and agility profile of the older participant".¹⁰

Some of the more energetic forms of dance, Cajun jitterbug, Irish set dance and Scottish country dancing for example, provide excellent aerobic exercise. Ballroom and Latin American dancing require good coordination and fluidity.¹¹

With dance, the exercise gained, while important, is secondary to the dance experience as a whole. Nonetheless, the physical demands of the dance experience should be appropriate to the capabilities of the older person.

The Better Ageing Research Collaborative guidelines for exercise programming for older people suggest multiple components including warm-up, aerobic exercise, specific concentric and eccentric strengthening exercises, and exercises to improve co-ordination balance and flexibility/mobility (Tai Chi or similar). The guidelines recommend that aerobic exercise should be conducted at 60-80% maximum heart rate and resistance exercise should be targeted at eight to 10 repetitions on the large muscle groups, building from two to three sets over a period of 12 weeks.¹²

Recent reviews have drawn together evidence of the health advantages of dance for older people. These reviews offer compelling evidence that dance programmes for older people can have significant health benefits.¹³

One review considered the quality of the evidence and focused on studies that provide very strong or fairly strong evidence of the benefits or otherwise of dance as exercise for older people.¹⁴ The review concluded that there is fairly strong scientific evidence that a dance-based exercise programme can improve older people's:

- aerobic power;
- muscle endurance of the lower extremities;
- muscle strength of the lower extremities;
- flexibility of the lower extremities;
- static balance;
- dynamic balance and agility; and
- gait speed.

There is less strong evidence that dance-based exercise programmes for older people can also:

- increase bone-mineral content in the lower body;
- increase muscle power of the lower extremities;
- reduce the rate of falls; and
- reduce cardiovascular health risk.¹⁵

DANCE IS MORE THAN JUST EXERCISE

Dance for older people provides more than just an opportunity for greater levels of aerobic or resistance exercise than might normally be experienced, and the associated health benefits that such exercise will bring.

Dance, perhaps especially dance with a partner, including ballroom dancing and many forms of traditional folk dance, is a social experience with the mental-health benefits that can come from social involvement and avoiding social isolation.

Many forms of dancing, including ballroom dancing, require high levels of concentration and co-ordination with the mental-health advantages that can follow from increased levels of focused mental activity over a sustained period.

Dance is an enjoyable experience so that, in addition to the general improvement in an individual's sense of well-being that dance activity brings, dance programmes experience relatively low drop-out rates. As a result, older people gain proportionately greater exercise and other benefits overall from a dance programme.

Some forms of dance provide the opportunity for self expression and the mental health benefits that can follow from a sense of mental liberation and the release of tension.

Traditional folk dance, including Scottish and Irish country dance and traditional Greek or Turkish dance, may reawaken a sense of the cultural identity of youth for some older people with benefits similar to reminiscence and memory therapy.

Older people taking part in dance groups that have a performance outcome find additional satisfaction in a successful performance and the sense of purpose that the end performance provides to the dance experience.

“The opportunity to express oneself through the medium of dance holds benefit for both emotional and physical well-being.”

Involvement in dance facilitates a growth of confidence, is a forum for the expression of positive emotion and safe reminiscence, and helps participants increase physical activity levels and improve their physical health-related knowledge.”

- Joynson, Hui and Stickley, 2009

¹⁰ Marks, 2005 referencing Judge, 2003

¹¹ Bremer, 2007

¹² Better Ageing Research Collaborative, 2005

¹³ Keogh et al (2009), Trinity Laban Conservatoire of Music and Dance (2011) and Dance South West and the Department of Health (2011)

¹⁴ Keogh et al (2009)

¹⁵ Keogh et al, 2009b

KEY BENEFITS OF DANCE

Balance

One of the most commonly cited benefits of dance for older people is an improvement in balance. Balance, mobility and fear of falling are major factors associated with the risk of falling in older people. Dance studies have shown improvements in balance either in general or in association with specific conditions such as Parkinson's disease.¹⁶

Improved balance arising from dance has been found in studies of jazz dance, Argentine tango, Caribbean dance and social dance.¹⁷

A group of older social dancers from the Bronx, who were studied, averaged 80 years of age, danced on average four days per month, and had a median length of time dancing of 30 years. The group was matched with a control group of older non-dancers and, although no differences were observed in cognition and strength between the two groups, the older social dancers showed better balance and had longer steps and strides reflecting a better walking pattern.¹⁸

Dance has also been shown to improve 'balance confidence' associated with a reduced risk of falls. The fear of falling in itself causes an increased risk of falling so improvements in 'balance confidence' can be as important as improvements in balance itself in reducing the risk of falls.¹⁹

Strength and gait

Evidence of the positive effect of dance programmes on strength and gait is less strong than for improvements in balance. The study of social dancers in the Bronx above, while finding no difference in the strength of older social dancers, did observe better stance and gait than that of the non-dancers.

Improving strength may not be a focus of dance, but dance classes can be designed to promote strength. In a 2008 study of the effects of Argentine

tango, a group of adults aged more than 60 years who had sustained a fall in the last year and reported a fear of falling, participated in twice-weekly, two-hour long sessions for 10 weeks. A control group participated in a walking group for the same frequency and duration. Members of the Argentine tango group demonstrated a greater improvement in lower extremity strength as well as normal and fast gait speeds than the control group.²⁰

In a much earlier study to determine the effect of low-impact aerobic dance on 53 sedentary older women, after 12-weeks of low-impact aerobic dance, the group improved significantly on all functional fitness components except motor control/coordination, including cardiorespiratory endurance, strength/endurance, body agility, flexibility, body fat, and balance.²¹

A randomized control trial to examine the effect of the Exercise Dance for Seniors (EXDASE) programme on lower-body functioning among older individuals from residential care facilities in the Czech Republic, when compared with a control group, found that the exercise-dance group outperformed the control group on all measures from pre-test to post-test. The study concluded that relatively simple dance-based exercise can support lower-body functioning in previously sedentary, frail older adults.²²

Cognitive benefits

Despite the many positive benefits of experience and maturity, human ageing is commonly associated with a progressive decline in mental and physical capabilities. Older people typically experience a progressive decline in cognitive ability, memory and reaction time as they age.²³

A 2010 Swedish study compared older people who had taken part in amateur dance over a long period (16.5 years on average) with a matching control group who had no history of dancing or sporting activity. In addition to improvements in posture and

balance the amateur dancers were observed, on average, to have superior performance in reaction times, motor behaviour and tactile and cognitive performance. Although the best performers in both groups were similar, the dancing group lacked the poor performers present in the control group. The researchers concluded that "the far-reaching beneficial effects found in the amateur dance group make dance, beyond its ability to facilitate balance and posture, a prime candidate for the preservation of everyday life competences of elderly individuals".²⁴

Social benefits

Interviews undertaken with older people who have taken part in dance groups tend to emphasise the social benefits of taking part. Experiences as varied as line dancing in South Africa, ballroom dancing in Brazil, Belfast or Blackpool or folk dance in Turkey record the social advantages of taking part together with improvements in well-being and quality of life.²⁵

In the Belfast study, when participants were asked "what do you get out of dancing" and "how does it make you feel", as well as "losing weight", "staying active", "improved coordination" and "brain stimulation" some said it was for having fun, having a good time, or having a laugh.

For an older person, dance can provide continuity within change.

It offers an opportunity to be sociable and have fun in ways that both reflect and avowedly move beyond the dancers' teenage years.

It promotes a welcome sense of a community spirit.

It is a way of becoming visible and aesthetically pleasing, and it bestows a sense of worth and achievement in skills learnt through dancing.

- Cooper and Thomas, 2002

¹⁶ Krampe, 2010; Hackney and Earhart, 2010

¹⁷ Alpert et al, 2009; Wallman et al, 2009; McKinley et al, 2008; Hackney and Earhart, 2009; Federici, Bellagambi and Rocchi, 2005; Verghese, 2006

¹⁸ Verghese, 2006

¹⁹ Krampe, 2010; Hackney and Earhart, 2010; McKinley, 2008; Zijlstra, 2007

²⁰ Rabbia, 2010; McKinley et al, 2008

²¹ Hopkins, 1990

²² Holmerová et al, 2010

²³ Park, O'Connell and Thomson, 2003

²⁴ Kattenstroth et al, 2010

²⁵ Nadasen, 2008; Lima and Vieira, 2007; Skinner, 2009; Eyigor, 2007

DANCE TO HELP WITH PARTICULAR CONDITIONS

Arthritis

Dance-based exercise is often grouped with Tai Chi as a possible treatment for older people with arthritis. A 2005 review of all relevant evidence to date concluded that, although the quality of available evidence was variable, dance-based exercises and Tai Chi may be very useful rehabilitation strategies for people with different forms of arthritis. The review makes the point that, because dance-based exercise and Tai Chi are both pleasurable activities, people with arthritis will be more likely to participate.²⁶

Observation of an eight-week dance-based aerobic exercise programme, for individuals with severe rheumatoid arthritis, consisting of 16 one-hour sessions (twice per week), rising to 25 minutes of dance in the hour, found that participants experience a significant improvement in gait speed compared with a control group. Participants also experienced positive changes in depression, anxiety, fatigue and tension.²⁷

A similar dance-based comparative trial of individuals with rheumatoid arthritis in 1995 had observed an average improvement in aerobic power of 13% with a maximum improvement of 40%.²⁸

Falls

As with arthritis, Tai Chi and dance-based exercise are linked together as suitable strategies for the prevention of falls in older people by improving balance, lower body functionality and gait. Most of the studies already discussed that show dance as having the effect of improving balance and gait, mean that dance is also likely to have the secondary effect of reducing the risk of falls in older people.

As older people become frail, partly as a result of reduced physical activity, the fear of falling causes them to reduce their levels of physical activity even further resulting in a vicious spiral.²⁹ Improvements in both balance and 'balance confidence', arising from dance, can help to break this spiral.

Several studies suggest that improvements in balance and gait brought about by dance are likely to reduce the risk of falls but there is very little firm

evidence to identify a reduction in the number of falls following a dance intervention. However, a 2005 study of the effects of a Korean traditional dance movement programme on elderly women suggests that, in addition to improvements in balance and depression in the dance group, compared with a control group, a reduction in the number of falls was also experienced.³⁰

Parkinson's disease

Parkinson's disease is a progressive neurodegenerative movement disorder that is often accompanied by impaired balance and walking. The observed improvements in balance and gait brought about by taking part in certain forms of dance suggest that dance may be an appropriate intervention for older people and others suffering from Parkinson's disease.

Because dance is performed to music, the music acts as an external cue to facilitate movement. Dance also involves the teaching of movement strategies, in particular, with Argentine tango, the ability to walk backwards. Dance also generates the need to control balance dynamically, all of which are features of exercises recommended to offset the problems caused by Parkinson's disease.³¹

Several studies have demonstrated the benefits of dance for individuals with Parkinson's disease. An uncontrolled pilot study to explore the possible benefits of 'contact improvisation' dance for individuals with Parkinson's disease found measurable improvements in motor function and balance, improved walking, increased backward step length and a high level of enjoyment.³²

A further study of 20 partnered tango lessons for people with severe Parkinson's disease, over a 10-week period, noted improved balance, endurance, balance confidence and quality of life. A comparative study of the effectiveness of Argentine tango compared with American ballroom dancing (waltz/foxtrot) or no intervention for individuals with mild-moderate Parkinson's disease concluded that tango may better target deficits associated with Parkinson's disease than waltz/foxtrot but that both dance forms may benefit balance and locomotion.³³

Dementia

Dance may be beneficial in two ways with respect to dementia: through prevention and through therapy.

A 2003 study looking at leisure activities and the risk of dementia in later life found that while mental stimulation, such as frequent crossword solving, reduced the chance of developing dementia in later life, physical activity generally did not. The major exception was frequent ballroom dancing which brought about a 76% reduction in the chances of developing dementia and was the most beneficial of all the hobbies and leisure activities examined.

The relationship between the occurrence of dementia and participation in particular leisure activities was examined in a pair of inter-related studies known as the Bronx Ageing Study and the Einstein Ageing Study. A group of 469 English-speaking older people aged between 75 and 85, living in the Bronx, New York, were followed up between 1980 and 2001 by researchers at the Albert Einstein College of Medicine led by Joe Verghese.³⁴

The results were initially published in the New England Journal of Medicine. The study found that while frequent cognitive activity such as playing board games or playing a musical instrument, reduced the chances of getting dementia, physical activity, in general did not. The one exception was dancing.

Frequent dancing (mainly ballroom) was associated with a Cox hazard ratio for dementia of 0.24 - a 76% reduction in the chance of dementia, compared with a base of no activity. This was the greatest effect of any single leisure activity.

The explanation offered by Verghese was that "dancing involves precise physical activity, listening to the music, remembering dance steps and taking your partner into account, which is very mentally testing".

As non-verbal forms of communication, movement and dance are particularly suitable in the treatment of people with dementia and match well with the concept of person-centred care.

Arts-based activities can make a real difference in dementia care, giving people who have lost the skills of ordinary conversation an opportunity to express themselves in a different way. Dance sessions with older people with dementia combine exercise with creative expression and recreation activities for in-patients with dementia are important for promoting well-being and quality of life. For an occupational therapist, for example, setting up a seated dance group for older women with dementia there are particular challenges in trying to evaluate the benefits of the project in the context of both dementia and dance.³⁵

Depression

Dance is both a social and physical activity and, as such, might be expected to reap the mental health benefits associated with both physical activity and avoiding social isolation. A 2006 review of the health benefits of physical activity confirmed irrefutable evidence of the health benefits of physical activity in combating various chronic conditions, including depression.³⁶

Furthermore, a recent research project working with two London communities of South Asian older people has highlighted the positive impact of dance on depression.³⁷

Although people taking part in dance sessions tend to report them as enjoyable experiences, it is rare that studies report a clear reduction in overall depression as a result of the dance programme.

A 2005 University of Nevada study offering eight ballroom dance lessons to 20 depressed older people recorded a limited effect, while a 12-week Korean traditional dance movement programme, offered three times a week to older Korean women who were not necessarily depressed at the outset, recorded a significant improvement in overall depression scores. A 2009 study of the effect of modified jazz dance on balance, cognition and mood in older adults found no significant change in Geriatric Depression Scale (GDS) scores resulting from the intervention.³⁸

²⁶ Marks, 2005

²⁷ Rabbia, 2010 referencing Moffet et al, 2000

²⁸ Noreau et al, 1995

²⁹ Zijlstra, 2007

³⁰ Keogh et al, 2009a; Keogh et al, 2009b; Jeon et al, 2005

³¹ Earhart, 2009

³² Marchant, Sylvester and Earhart, 2010

³³ Hackney and Earhart, 2010; Hackney and Earhart, 2009

³⁴ Vol 348 pp 2508-16 in June 2003 (Verghese et al, "Leisure activities and the risk of dementia in the elderly")

³⁵ Hill, 2001; Coaten, 2001; Kindell and Amans, 2003; Whyte, 2010

³⁶ Warburton, Nicol and Bredin, 2006

³⁷ Akademi, forthcoming

³⁸ Haboush et al, 2006; Jeon et al, 2005; Alpert et al, 2009

DANCE AS PERFORMANCE

Performance as an end-product of dance activity can add an extra dimension to the dance experience for older people.

A number of performance dance groups for older people exist in the UK including 'Dancing stage' in London and 'Mapping Memories' in Northern Ireland.

Company of Elders is a London based dance and performance group for people aged 60 and over. Established in 1989, it is an offshoot of Sadler's Wells' weekly Lilian Baylis Arts Club. Comments from participants in the 'Company of Elders' dance group reveal the additional benefits of performance dance:

"I do feel healthier and it does keep you fit. It improves your flexibility, your mobility, strength, balance, all of these things. Mind you, we do get a few aches and pains. We don't dance like 20-year-olds but we are still dancing."

"The Company of Elders is more than just a dance class, it's a performance group and I have realised that that's what the attraction is for me because we work towards something so there's an end product and that's very satisfying."

Performance dance groups will, by their nature, have limited membership and the demand may well outstrip the availability of places. The Company of Elders, for example, is full with a substantial waiting list but also offers weekly over-60s outreach classes in the London Borough of Islington.³⁹

TECHNOLOGY AND DANCE

Interactive video dance is a recent form of physical activity widely used by the younger generation. Recent studies have examined the appropriateness and effectiveness of the technology for use by older people.

In one study, 36 healthy older adults were recruited and offered three months of training and supervision using a video dance game designed for older people. Of the 36 starters, 25 completed the course. Completers were healthier than non-completers and completers showed gains in narrow walk time, self-reported balance confidence and mental health. Of the 11 non-completers, four withdrew due to musculoskeletal complaints.⁴⁰

A second study examined the attitudes of older women to interactive video dance. Forty relatively-inactive older women (average age 57) were organised into eight small groups performing interactive video dance which used a force-sensing pad with directional panels: the player stepped on the panels in response to arrows scrolling on a screen, synchronized to music. The experience elicited 113 positive responses and 71 negative. Positive responses included "it's fun" and "improves coordination" while negative responses related to the technology, the length of time to learn and the potential cost.⁴¹

PROMOTING THE BENEFITS OF DANCE FOR OLDER PEOPLE

As the world population ages, and the number of older people increases, it becomes increasingly important to improve the health profile of the ageing population by encouraging older people to adopt a healthier lifestyle. Health improvements will benefit everyone as they age and help the management of some of the physical and psychological changes associated with growing older.

One of the key contributors to a poor health profile is that many older people live a more sedentary and, often, a more isolated life.

Dance is an enjoyable social activity that has been shown not only to provide increased levels of physical exercise but also the opportunity to improve coordination, cognition and general mental well-being. For many older people it is the social aspects of participatory dance that are most valued and most important although the physical benefits are also well recognised.

Evidence of the preventive health benefits of dance is compelling and conclusive. Dance has also been shown to be beneficial in the treatment of existing conditions such as arthritis or Parkinson's disease.

There can be no doubt that dance has an important contribution to make to improving the health of older people and, through its positive impacts, also challenges many of the negative stereotypes of ageing.

As one Young@Heart participant put it: "It makes you feel alive, almost like you're young again. It's amazing that dancing can make you do that. I don't know anything else that can have that effect on you."⁴²

Too often policy makers in Government and beyond overlook the contribution that dance can make to the welfare of older people, often concentrating on exercise and sports-based activities and ignoring the inclusive nature of dance, and its potential contribution to the health and wellbeing of older people.

Bupa believes that this report shows that policy makers should pay more attention to dance when considering ways to promote active lifestyles and healthy living, especially for older people.

We believe that supporting organisations that provide dance activities for older people in the community, in care homes and in hospitals, can make a major contribution to the better future physical and mental wellbeing of the increasing numbers of older people that will make up the population of the UK and many other countries.

³⁹ Ross, 2007

⁴⁰ Studenski et al, 2010

⁴¹ Inzitari et al, 2009

⁴² Young@Heart (Joynson, Hui and Stickley, 2009)

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