

Importance of exercise for the elderly: literature review



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Chapter 1 – Introduction

The importance of physical activity and physical fitness in terms of “... health and longevity ...” have been linked since the “... earliest records of organized exercise used in health promotion ... (which were) ... found in China around 2500 B. C....” (Hardman et al, 2003, p. 3). Hippocrates, who is “... often called the Father of Modern Medicine, wrote ...”:

“... all parts of the body which have a function, if used in moderation and exercised in labours in which each is accustomed, become thereby healthy, well-developed and age more slowly, but if unused and left idle they become liable to disease, defective in growth and age quickly” (Hardman et al, 2003, p. 3).

The link between exercise and health has been a long established fact in medicine that also traces back to “ Cicero in 44 BC (who was himself echoing Aristotle) ...” who believed that health as one ages is improved by having a good diet along with exercise and mental stimulation (Harlow, 2006). In fact, Cicero “... saw old age as something yet to happen to him ...” when he was in his sixties and writing his treatise in an period when less than “... seven percent of the population reached sixty” (Harlow, 2006). The preceding three factors of diet, exercise and mental stimulation as mentioned by Cicero are ingredients that are present in when one participates in sports.

The subject of elderly participation in sporting activities in the United Kingdom represents one of considerable importance as the percentage of older adults increases in proportion to the UK’s total population. This <https://assignbuster.com/importance-of-exercise-for-the-elderly-literature-review/>

examination shall seek to equate the participation rates for sports in the United Kingdom, delving into how, and if social class represents a contributing factor concerning the potential of this group participating in sporting activities in later life. The prospect of sport participation in later life shall also be undertaken along with whether social class enters into this facet as well concerning participation rates.

The importance of age is impacting the population in the United Kingdom whereby the number of people over the age of 65 has increased to 16 percent, with the age group 85 and older comprising 12 percent of the total population (National Statistics, 2007). The significance of the foregoing is that people are living longer as a result of better nutrition, health care, and living conditions as well as life styles (Quanten, 2004). Interestingly, Quanten (2004) makes the observation that medical science has determined that our basis for calculating the longevity of ancient civilizations is faulty in that the technique utilized in estimating age was based upon bone density. The bone samples generally belonged to middle aged men and women, thus the formula utilized to determine age was based upon the weakening of said density which was slower then than it is now (Quanten, 2004). Thus it was found that the estimation of age has been seriously under represented, putting the average life span of early man in the range of somewhere between 80 and 100 years, meaning that in modern terms civilization has lost ground in aging as opposed to gaining, as was the consensus of thought (Quanten, 2004). Evidence supporting the preceding in today's world can be found in the fact that there are many examples of individuals living to 120 to 130 years, with the vast majority of them living in extreme conditions where

a high degree of physical labour is required for survival, as represented by jungles untouched by modern society, and harsh climates as found in Northern Russia (Quanten, 2004). The common fact linking the ancient study and present day examples of individuals living 120 to 130 years is that their environments were and are more physical in their demands, with the lifestyles requiring more exercise.

Kligman and Pepin (1992, pp. 33-34, 37-44. 47), the American College of Sports Medicine (1998, pp. 992-1008), Dishman (1994, pp. 1087-1094) and Nelson et al (1991, pp. 1304-1311) along with numerous other sources all attest to the benefits of exercise in early life as well as throughout life as beneficial in staving off disease as well as prolonging life. Studies as undertaken by Shepard (1993, pp. 61-64) and, Paffenbarger et al (1989, pp. 605-613) for example, cite incidences in Finland as well as Harvard University in the United States where those who consistently exercised lived on average 2 to 3 years longer than their more sedentary counterparts.

The foregoing brief examples and analysis of age and exercise has been conducted to provide an initial foundation for understanding the framework of this examination which shall delve into elderly sports participation rates in the United Kingdom. The topic of this study is to attempt to determine, if possible, how social class affects the likelihood of doing sporting activities in later life, with its aim to see if social class does have an influence on people taking/carrying on sporting activity in this context. In conducting this examination, the foregoing also seek to compare individuals in the age group representing 55 years of age and above who participate in sporting activities against those who do not through a comparison of their social class

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backgrounds as represented by working middle class and upper middle class classifications to determine if any correlation exists.

Chapter 2 – Literature Review

Resnick et al (2006, p. 174), in “ Screening for and Prescribing Exercise for Older Adults” advise that there is substantial scientific evidence that supports the benefits of exercise in maintaining “... function, health, and overall quality of life for older adults. The article advises that physical activity represents “... one of the greatest opportunities to extend ...” an individual’s active as well as independent life and reduce the incidence of disability, and that regular physical activity by older adults are more likely to have better health (Resnick et al, 2006, pp. 174-182). In spite of the clear evidence of the preceding, most adults do not participate or engage in either sport or physical activity, and unfortunately the prescription of a regular physical regime is not yet a routine clinical practice (Resnick et al, 2006, pp. 174-182). The article went on to state that the best methodology via which to engage in a sport or physical exercise is to first seek the aid of a physician to reach a determination of one’s present medical and physical state in order for a person to understand the types of activities they should / can engage in, as well as seeking help with a program to ease them into a proper regime.

The Council of Europe (1993) defines sport as encompassing “... all forms of physical activity ...” which includes casual participation for which the aim of the activity is to improve “... physical fitness and mental well-being ...” along with the formation of social relationships and or obtaining competitive results. As such, the foregoing expands what one traditionally understands <https://assignbuster.com/importance-of-exercise-for-the-elderly-literature-review/>

as the definition of sport into a broader context that includes individual sport as well as fitness activities that include certain dance activities, and aerobics along with walking and cycling (Rowe et al, 2004). The Council of Europe's (1993) definition includes informal and casual participation, along with the more serious club and professional pursuits (Rowe et al, 2004). The study conducted by Rowe et al (2004) defined participation as at least once a week in the activity, and found that the evidence collected indicated that the United Kingdom had moved towards stagnation with regard to participation levels. The following chart reflects these findings:

Table 1 - Sport, Game and Physical Activity Participation in the United Kingdom

(Rowe et al, 2004)

Age	Participation	Participation	Participation
	%	%	%
	1987	1993	1996
16-19	80	81	79
20-24	69	70	69
25-29	65	67	65

30-44	57	59	58
45-59	35	43	40
60-69	24	28	30
70+	9	15	12

The preceding indicates the fluctuating levels of participation occurring at the rate of at least one time a week over a four week period for the indicated periods. The following Table shows the foregoing, but excludes walking.

Table 2 - Participation in Sports, Games and Physical Activity

(Excludes walking)

(Rowe et al, 2004)

Age	Percent Males	Percent Females
30-44	76	52

45- 59	50	39
60- 69	45	29
70+	20	10

Social class differences explored in the study by Rowe et al (2004) showed a marked difference in sport participation between the highest and lowest social classifications, as one would expect owing to differences in the ability to spend time on pursuits as a result of disposable income and time, in addition to living closer to facilities and or having the transportation and or a circle of friends who also participate, thus making sport an increased part of their lifestyle.

Table 3 - Differences in Social Class, Sport Participation 1987 - 1996

(Rowe et al, 2004)

	1987	1990	1993	1996
Social Class	(Percent)	(Percent)	(Percent)	(Percent)
Professional	65	65	64	63
Senior Manager	52	53	53	52

Junior Manager	47	49	49	48
Skilled	49	50	46	45
Semi-skilled	34	37	35	36
Unskilled	27	28	30	24

Table 4 - Projected Changes in Number of Sport Participants between 1996 - 2026, Based on Trends Established 1990 - 1996

(Rowe et al, 2004)

	1996	2026
Age	(in	(in
	thousands)	thousands)
30- 44	6, 300	5, 500
45- 59	3, 500	3, 600
60- 69	1, 300	2, 400
70+	700	950

The total number of estimated participants in varied sports activity is shown projected into the year 2026 in the above Table. The increased number is due to the rise of the number of people in these age groups as opposed to actual increased participation (Rowe et al, 2004). Older aged individuals, as shown by Tables 1 and 2 have significantly lower sport activity participation rates which to a large degree, as expressed in the study conducted by Rowe et al (2004), is due to reduced participation in their social group, ailments, lack of income, non-inclusion in their lifestyle as well as being uninformed that sport and exercise represent a healthful benefit that should be continued throughout an individual's life.

Thurston and Green (2004, pp. 379-387) support the previous contention of the development of more active lifestyles for older individuals, as does the Department of Health (1995) in their document " More People, More Active, More Often. Physical Activity in England", and Department of Health documents in the years 1999, 2000, 2001 and 2002 that all make references to the overwhelming evidence that indicates that frequent and regular physical activity is beneficial to health. The foregoing includes an increased life expectancy, diabetes, control over obesity, reduction in coronary heart disease, positive health outcomes, increased mobility and coordination as well as other benefits (Thurston and Green, 2004, pp. 379-387). Studies have shown that even if an adult begins sport and exercise programs as late as 60 years of age they can improve their life expectancy by 1 to 2 years, however 40% of adults in the above 60 year age group do not partake in such a regime even if they were aware of the benefits (Thurston and Green, 2004, pp. 379-387).

The understanding of the importance of the older generation as a part of the overall national profile as well as economic, health, medical and social system, the House of Lords published is document titled “ Aging: Scientific Aspects”, in 2005 (House of Lords, 2005). The Report stated that the “... economic implications of changing life expectancy are ... of great importance ...”, with the “... urgency of these matters ... “ made plain from statistics that point out “... for the first time the number of people in England and Wales aged 60 and over was greater than the number aged under 16” (House of Lords, 2005). When the figures for what is termed the ‘ oldest old’, meaning individuals above the age of 85 are included, the implications are even more striking:

Table 5 - Oldest Old Comparisons, UK and the World

(House of Lords, 2005)

Age Year UK Globe

85	190	5%	1%
	0		
85	200	16%	7%
	0		
85	202	20%	12%
	0		
85	205	—	20%

0

The growth rate of the aging population in the United Kingdom is outstripping the global rate to the point whereby the UK is projected to reach a figure of 20% of its total population in 2020, fully thirty years before the global population will reach that figure, thus making the prospect of old age health an important one for the country.

Table 6 - Life Expectancy, United Kingdom

(House of Lords, 2005)

Sex	Year		Age		Increase In Years
	1981	2002	70	75	
United Kingdom					
Males	1981	2002	70	75	5.1
Females	1981	2002	76	80	3.7
England					
Males		2002		76	

	2	2
Females	200	80.
	2	7
Scotland		
Males	200	73.
	2	5
Females	200	78.
	2	9

The above Table indicates that the life expectancy in England is higher when counted alone. In examining the elderly sports participation rate for the older population in the United Kingdom utilizing social class distinctions, it is important equate the defining aspects of these groups. The following defines the preceding as found in the House of Lords document " Aging: Scientific Aspects":

Table 7 - Social Class Segments

(House of Lords, 2005)

Class Description Examples of Occupations

Non-manual

Professional Doctors, chartered

	accountants, professionally qualified engineers
Managerial and Technical/ intermediate	Managers, school teachers, journalists
Skilled non- manual	Clerks, cashiers, retail staff
Manual	Supervisors of manual workers, Plumbers, electricians, goods Vehicle drivers Warehousemen, security guards, machine tool operators, care assistants. Waiters and waitresses

Unskilled
 Labourers, cleaners and
 messengers

Table 8 – Life Expectancy by Social Class

(House of Lords, 2005)

Class	Life Expectancy	Life Expectancy
Description	Gap	Gap
Non-manual	Males	Females
Professional	7. 4	3. 1
Manual		
Unskilled	5. 9	2. 6

The preceding Table represented an aid in the later determination of social class and if this factor has any bearing, and or influence upon participation in carrying on sporting activities in later life. The House of Lord’s report on “Aging: Scientific Aspects” did indicate through the study of varied reports as well as consultations that it came to the conclusion, which is a consensus view, “... that aging is caused by lifelong accumulation of molecular and cellular damage ...” as opposed to the theory of a “... rigid inner clock ...” (House of Lords, 2005). Importantly, the ‘ Report’ indicated that the process of aging “... is more malleable than has been generally appreciated ...” and that the “... mechanisms governing health in old age ...” are processes that are ongoing throughout the lives of individuals (House of Lords, 2005). In <https://assignbuster.com/importance-of-exercise-for-the-elderly-literature-review/>

reference to the implications of this examination, the ' Report' "... summarized what appears to be a consensus view ..." regarding the key factors promoting good health as well as slowing down the ageing process as (House of Lords, 2005):

- physical activity;
- having a social role and function;
- good nutrition;
- absence of risk factors such as smoking and drinking to excess; and
- good mental health and well-being

The ' Report' stressed that physical activity represents a ' key' facet of good health and "... is the major modifiable influence on health in old age" (House of Lords, 2005). In making such a statement the ' Report' referred to ' The Royal Society of Edinburgh' which stated that exercise has been shown as being a critical factor in maintaining as well as modestly increasing bone density of adults, and more importantly can aid in the minimization of bone loss in older individuals (House of Lords, 2005). The overall ' Report' on " Aging: Scientific Aspects" provided key background information that proved helpful, with regard to general information, and indispensable with regard to demographic groups, exercise, and the government's recognition of the importance of the issue as well as the specific and key identification of key points.

With regard to sport, the Department for Culture, Media and Sport (2007a) aims to encourage wider sports participation, and in regard to the focus of this examination, to promote sport at the grassroots level, which has

implications concerning facilities that the older generation either has available, and or needs (Department for Culture, Media and Sport, 2007b). In its Report “ Where are we Now: The State of Sport Today”, it clarifies that the government does not run sport, but recognizes it as an important factor in the health, and well being of children, adults, and the older generation (Department for Culture, Media and Sport, 2007b). Overall, across all age and demographic groups, the United Kingdom ranks in the middle of the European Union in sports participation by the general public, as shown by the following:

Table 9-European Union General Population Sport Participation

(In Percent)

(Department for Culture, Media and Sport, 2007b)

Country	Participate more than 12 times a year	Occasional, less than 12 times a year	Non-Participant, takes part in some other physical activities	Non-Participant, no other physical activities
Finland	79	2	16	3

Sweden	70	0	8	22
Netherlands	57	6	37	0
UK	47	20	15	19
Ireland	43	21	10	26
Spain	25	6	43	26
Italy	18	5	37	40

In terms of intensity, individuals in the United Kingdom participate in sports on a less regular basis, and with less intensity (Department for Culture, Media and Sport, 2007b). The last aspect does not have applicability with regard to older adults, however the former is a telling statistics concerning its bearing on older sports participation.

Table 10-UK Sport Participation

(In percent)

(Department for Culture, Media and Sport, 2007b)

Rate of Intensity

Countr y	Intensiv e	Regula r	Occasional/ rare
UK	18	10	72
Swede n	37	22	41
Finland	39	34	27

The following table indicates the rates of participation of residents in the UK.

Table 11-Competitive and Organized Sport Participation in the UK

(Department for Culture, Media and Sport, 2007b)

Age Groups	Percen t
16-19	54
20-24	47
25-29	36
30-34	35
35-39	30
40-44	25

45-49	20
50-54	19
55-59	17
60-64	14
65+	10

The ' Report' indicates participation rates among social economic groups varies, however it does not break out these statistics into age groups.

Table 12-UK General Population Sports Participation by Social Economic Group

(Department for Culture, Media and Sport, 2007b)

Socio-Economic Group	Male s	Female s
Unskilled manual	34	19
Semi-skilled manual	49	29
Skilled manual	48	34
Intermediate/junior	61	43

Non-manual

Employer/manager 56 49

Professional 61 67

Table 13–UK Sport Participation by Ethnic Minority

(Department for Culture, Media and Sport, 2007b)

Ethnic Group	Male	Female
Black Caribbean	45	34
Black African	60	34
Black other	80	45
Indian	47	32
Pakistani	42	21
Bangladeshi	47	29
Chinese	53	39
Other	51	41
National	54	39

Average

Sport England (2005) undertook a study that systematically reviewed published and unpublished research studies regarding children, and adult reasons concerning participation as well as non-participation in sport, which this examination utilized to add to the other research and literature sources. An important facet that was identified in the study was one representing an individual's personal appearance and proficiency levels. The preceding two aspects are generally overlooked factors that are a part of a person's sport participation consideration. The very real concern of having an unfit body, being out of shape, not able to conduct certain aspects of sport participation performance on a level that could potentially lead to personal embarrassment, are very real concerns that could and do enter into dissuading individuals from participating in a sporting activity (Sport England, 2005).

Facilities and availability are also factors that enter into the participation equation, along with costs. For example, the incidence of parks, walkways, golf, tennis, cricket, bicycle paths, gym facilities and the like are more likely to be located near to upper income neighbourhoods than lower income