Understanding participation in sport and physical activity among children and adults: a review of qualitative studies

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Abstract

Qualitative research may be able to provide an answer as to why adults and children do or do not participate in sport and physical activity. This paper systematically examines published and unpublished qualitative research studies of UK children's and adults' reasons for participation and non-participation in sport and physical activity. The review covers peer reviewed and gray literature from 1990 to 2004. Papers were entered into review if they: aimed to explore the participants' experiences of sport and physical activity and reasons for participation or non-participation in sport and physical activity, collected information on participants who lived in the United Kingdom and presented data collected using qualitative methods. From >1200 papers identified in the initial search, 24 papers met all inclusion criteria. The majority of these reported research with young people based in community settings. Weight management, social interaction and enjoyment were common reasons for participation in sport and physical activity. Concerns about maintaining a slim body shape motivated participation among young girls. Older people identified the importance of sport and physical activity in staving off the effects of aging and providing a social support network. Challenges to identity such

Public Health, University of Oxford, Rosemary Rue Building, Old Road Campus, Oxford OX3 7LF, UK *Correspondence to: S. Allender. E-mail: steven.allender@dphpc.ox.ac.uk as having to show others an unfit body, lacking confidence and competence in core skills or appearing overly masculine were barriers to participation.

Introduction

It is generally accepted that physical activity confers benefits to psychosocial health, functional ability and general quality of life [1] and has been proven to reduce the risk of coronary heart disease [2] and some cancers [3]. Here, physical activity refers to 'any bodily movement produced by skeletal muscles that results in energy expenditure' [4].

Conditions associated with physical inactivity include obesity, hypertension, diabetes, back pain, poor joint mobility and psychosocial problems [5–7]. Physical inactivity is a major public health challenge in the developed world and is recognized as a global epidemic [8]. Within the United States, the rate of childhood obesity is expected to reach 40% in the next two decades [9] and Type 2 diabetes is expected to affect 300 million people worldwide within the same time [10].

The UK government has set a target for '70% of the population to be reasonably active (for example 30 minutes of moderate exercise five times a week) by 2020' [8, 11] (p. 15). This target could be described as ambitious; only 37% of men and 24% of women in the United Kingdom currently meet this benchmark [12]. The Health Survey for England (HSE) [13] found that the number of physically inactive people (less than one occasion of 30-min activity per week) was increasing and that this trend was consistent for both genders and

across all age groups [14]. Conventionally, sport and forms of physical activity such as aerobics, running or gym work have been the focus of efforts to increase population activity levels. The HSE measure includes activities, such as gardening and housework, which are not traditionally considered as physical activity. Sport England found that in the 10-year period between 1987 and 1996 participation in traditional types of sport and physical activity stagnated or fell in all groups other than the 60- to 69-year old age group. This trend was socially patterned by gender, socio-economic status, social class and ethnicity [15]. There are many broad influences upon physical activity behavior including intra-personal, social, environmental factors and these determinants vary across the life course [4].

Ambitious national targets and increased funding of community sport and physical activity projects (such as the Sports Hub in Regent's Park, London) [16] show that sport and physical activity is gaining social, political and health policy importance. The increased interest in physical activity is welcome, but the trend data hints that current interventions to promote sport and physical activity are inadequate. Further, it questions whether the evidence base supporting physical activity policy provides an adequate understanding of the reasons for participation or non-participation in physical activity.

Historically, research into determinants of sport and physical activity participation has tended to adopt quantitative methods, which undertake cross-sectional surveys of pre-determined questions on individual's knowledge, attitudes and beliefs about sport and physical activity. For example, the HSE [13] asks adults about activity in five domains: activity at work, activity at home (e.g. housework, gardening, do it yourself maintenance (DIY)), walks of ≥15 min and sports and exercise activities. Large studies such as these can successfully assess the direction and strength of trends in participation but are unable to explain how children and adults adopt, maintain or cease to participate in sport and physical activity throughout their lives.

An alternative approach is required which is sensitive to the contextual, social, economic and

cultural factors which influence participation in physical activity [17]. Qualitative methods offer this in-depth insight into individuals' experiences and perceptions of the motives and barriers to participation in sport and physical activity [18] and are recognized as increasingly important in developing the evidence base for public health [19]. Although qualitative research is a blanket term for a wide range of approaches, this type of research typically aims to understand the meaning of individual experience within social context. The data for qualitative studies often come from repeated interviews or focus groups, are generally more indepth and have fewer participants than quantitative research. Additionally, the inductive nature of qualitative research allows for theory to emerge from the lived experiences of research participants rather than the pre-determined hypotheses testing of quantitative approaches.

Thomas and Nelson [20] describe qualitative methods as the 'new kid on the block' in sport and physical activity research and a small body of qualitative research on sport and physical activity in the United Kingdom is known to exist. This paper aims to systematically examine published and unpublished qualitative research studies which have examined UK children's and adults' reasons for participation and non-participation in sport and physical activity.

Method

The review of qualitative research covered the period from 1990 to 2004. This 15-year period was considered adequate to cover the most recent research on barriers and motivation to participation in sport and physical activity. Research papers were sourced in three ways. First, a wide range of electronic databases were searched, including Medline, CINAHL, Index to Thesis, ISI Science Citation Index, ISI Social Science Citation Index, PAIS International, PSYCHINFO, SIGLE and SPORTS-DISCUS. Second, relevant references from published literature were followed up and included where they met inclusion criteria. Third,

additional 'gray' literature not identified in electronic searches was sourced through individuals who were likely to have knowledge in this area, including librarians and researchers active in the field. This third step ensures inclusion of papers which may not be submitted to peer review journals including reports for government bodies such as Sport England or the Department of Health. Search terms included 'sports', 'dancing', 'play', 'cycle', 'walk', 'physical activity', 'physical education' and 'exercise'.

Papers which met the following criteria were entered into the next phase of the review:

- (i) the aim of the study was to explore the participants' experiences of sport and physical activity and reasons for participation or nonparticipation in sport and physical activity;
- (ii) the study collected information on participants who lived in the United Kingdom; and,
- (iii) the study presented data collected using qualitative methods.

Two researchers (GC and SA) reviewed each paper independently. Results were compared and discrepancies discussed. Data were extracted using a review schema developed by the research team. In most cases, the original author's own words were used in an attempt to convey the intended meaning and to allow for more realistic comparison between studies.

Results

More than 1200 papers were identified by the initial search strategy. A total of 24 papers were accepted into the final stage of the review, with all but two published during or after 1997. Half of the papers (12) reported research where data were collected in community settings. Of the others, four were set in general physician (GP) referral schemes (in which GPs refer patients to physical activity groups), three in schools, two in sports and leisure clubs and one in a group of three national sports governing bodies. Table I shows that studies described participants by

Table I. Participant characteristics

Descriptor	Count	
Description of participants in research		
Socio-economic status	3	
Working-class families		
Low-income women		
Public and private patients		
Exercise level	2	
Elite runners, runners and joggers		
Exercisers and non-exercisers		
Ethnicity	2	
Scots, Pakistanis, Chinese, Black Africans,		
Bangladeshi and African Caribbean		
South Asian and black people (18–30 years)		
Other	3	
Physically impaired, hearing impaired,		
visually impaired, learning difficulties		
Gay men, disabled men and health workers		
Members of three English Sporting		
National Governing Bodies		
Not specified	14	
Total	24	
Description of participants' age		
Younger children	2	
5- to 15- year old children and their parents		
9- to 15-year old children		
Teenage girls and young women	5	
14-year-old girls		
15-year-old girls		
Year 9 girls		
Teenage girls		
Young women (16–24 years)		
Young people (18–30 years)	1	
South Asian and black people (18–30 years)		
Middle-aged people (30–65 years)	3	
Men 30–61 years old		
People aged 30–65 years		
Middle-aged men		
Older people (50+ years)	4	
Older people (50+ years)		
Newly referred older women (50+ years)		
People aged >60 years		
Not specified	9	
Total	24	
10141	24	

socio-economic status (working class, low income, private or public patient), ethnicity (South Asian and Black in one study, or Scottish, Pakistani, Chinese, Bangladeshi in another) and level of exercise (Elite or other, participant or non-participant).

Almost two-thirds of papers (15) did not specify a theoretical framework. Of the nine that did, three used grounded theory, three used a feminist framework, one used figurational sociology, one used gender relations theory and one used Sidentop's model of participation.

The age profile of participants was described in different ways although some grouping was possible (Table I). Two studies involved children aged <15 years (5–15 years old and 9–15 years old), seven studies involved research with teenage girls or younger women (aged between 14 and 24 years), 11 related to middle-aged participants (30–65 years) and four reported on adults 50 years or older. The results are organized in two sections: reasons for participation in physical activity and barriers to participation in physical activity. Within each section, results are presented in order of the age group which participated in the study.

Reasons for participation in sport and physical activity

Table II summarizes the main findings of this review. Although most people recognized that

there were health benefits associated with physical activity, this was not the main reason for participation. Other factors such as weight management, enjoyment, social interaction and support were more common reasons for people being physically active.

Young children

Participation for young children was found to be more enjoyable when children were not being forced to compete and win, but encouraged to experiment with different activities. MacPhail et al. [21] found providing children with many different types of physical activity and sport-encouraged participation. Enjoyment and support from parents were also crucial [22]. Parents play a large role in enabling young children opportunities to be physically active and Bostock [23] found that mothers with young children discouraged their children from playing in an environment perceived as unsafe. Porter [24] showed that parents are more supportive of activity with easy access, a safe play environment, good 'drop-off' arrangements and activities available for other members of the family.

Age group	Motivations	Barriers
Young children	Experimentation Unusual activities Parental support Safe environment	Competitive sports Highly structured activities
Teenagers and young women	Body shape Weight management New social networks Family support Peer support	Negative experiences at school Peer pressure Identity conflict PE uniforms Boys' dominance in class Competitive classes Lack of teacher support
Adults	Sense of achievement Skill development Medical sanction Support networks Enjoyment	Negative school experiences Anxiety in unfamiliar surrounds Lack of social network Identity conflict Lack of role models
Older adults	Social support Health benefits Enjoyment	Unclear guidance Lack of role models

Teenagers and young women

Concerns about body shape and weight management were the main reasons for the participation of young girls. A number of studies [25–27] reported pressure to conform to popular ideals of beauty as important reasons for teenage girls being physically active. Flintoff and Scraton [28] interviewed very active girls who described having learnt new skills, increased self-esteem, improved fitness and developed new social networks as motivation to be physically active.

Support from family and significant others at 'key' transitional phases (such as changing schools) was essential to maintaining participation [29]. Those who continued participating through these transitionary periods recalled the importance of positive influences at school in becoming and staying physically active. For girls, having peers to share their active time with was important.

Adults

A wide range of adults were studied including patients in GP referral schemes, gay and disabled groups, runners and South Asian and Black communities.

Adults exercise for a sense of achievement, skill development and to spend 'luxury time' on themselves away from daily responsibilities [30]. Non-exercisers recalled negative school experiences as reasons for not participating into middle age [31].

Studies of GP exercise referral schemes found that the medical sanctioning of programs was a great motivator for participation [32]. Other benefits reported by referral scheme participants were the social support network created and the general health benefits of being active [30, 33].

Among disabled men, exercise provided an opportunity to positively reinterpret their role following a disabling injury [34]. For this group, displaying and confirming their status as active and competitive was beneficial. Participants in this study described the support network offered by participation as the real value of physical activity and sport. In particular, meeting other disabled men and sharing similar experiences was a key moti-

vator. The building of skills and confidence was another motive for disabled men's participation in sport [35].

The enjoyment and social networks offered by sport and physical activity are clearly important motivators for many different groups of people aged between 18 and 50 years. The reasons for participation can, however, differ subtly between people within a single group. For example, Smith [36] interviewed members of a running club and found a distinction between 'runners' and 'ioggers'. Runners were elite members of the club and were motivated by intense competition and winning. Conversely, joggers did not consider themselves competitive in races but aimed to better their own previous best time. Joggers were more motivated by the health benefits of running and the increased status afforded to them by non-exercisers who saw them as fit and healthy.

Older adults

Hardcastle and Taylor [37] suggest that a complex interplay of physical, psychological and environmental factors influence participation among older people. Older adults identified the health benefits of physical activity in terms of reducing the effects of aging and being fit and able to play with grandchildren [38].

While GP referrals [32, 39] encouraged the uptake of exercise in older age groups participation appears to be maintained through enjoyment and strong social networks. This is exemplified by Cooper and Thomas' [40] study of ballroom dancers in London. Social dancers described dance as helping them challenge the traditional expectations of older people being physically infirm. Participation over time was supported by the flexible nature of ballroom dancing. Different styles of dance provide more or less vigorous forms of activity to suit the skills and limitations of each dancer. Equally important was the social network provided by the weekly social dance encouraging the maintenance of participation across major life events such as bereavement through the support of other dancers in the group. Other studies also highlight the importance of social networks in maintaining participation [41].

Barriers to participation in sport and physical activity

On a simple level, barriers to participation in physical activity include high costs, poor access to facilities and unsafe environments. Other more complex issues relating to identity and shifting social networks also have a great influence. There were no studies reporting on the barriers to participation in sport and physical activity facing young children.

Teenagers and young women

Negative experiences during school physical activity [physical education (PE)] classes were the strongest factor discouraging participation in teenage girls [29]. For many girls, impressing boyfriends and other peers was seen as more important than physical activity. While many girls wanted to be physically active, a tension existed between wishing to appear feminine and attractive and the sweaty muscular image attached to active women [25].

A number of studies [27, 29, 42] showed that tight, ill-fitting PE uniforms were major impediments to girls participating in school sport. These concerns over image and relationships with peers led to an increased interest in non-active leisure.

Flintoff and Scraton [28] cited the disruptive influence of boys in PE class as another major reason for girls' non-participation. The competitive nature of PE classes and the lack of support for girls from teachers reinforced these problems. Girls were actively marginalized in PE class by boys and many described not being able to get involved in games or even getting to use equipment. Teachers were found to be complicit in this marginalization by not challenging the disruptive behavior of boys in class. Coakley and White [29] noted that boys were also disruptive out of class and some boys actively discouraged their girlfriends from participating in sport as it made them look 'butch'. Mulvihill et al. [22] and Coakley and White [29] both argue that gender stereotyping has serious negative effects on the participation of girls. Realistic role models for all body types and competency levels were needed rather than the current 'sporty' types.

Orme [42] found that girls were bored by the traditional sports offered in PE. Mulvihill *et al.* [22] found that many girls were disappointed with the lack of variety in PE and would rather play sports other than football, rugby and hockey. Being unable to demonstrate competency of a skill to peers in class also made people uncomfortable with PE. Non-traditional activities such as dance were more popular than traditional PE as they provided the opportunity for fun and enjoyment without competition [28].

Coakley and White [29] showed that the transition from childhood to adulthood was a key risk time for drop-out. Teenagers did not wish to be associated with activities which they described as 'childish' and instead chose activities that were independent and conferred a more adult identity upon them. One participant in this study described leaving a netball team of younger girls because it was 'babyish'. A number of young women interviewed by these researchers described their belief that 'adult' women did not participate in physical activity or sport.

Adults

Anxiety and lack of confidence about entering unfamiliar settings such as gyms were the main barriers to participation in GP referral schemes. Not knowing other people, poor body image and not fitting in with the 'gym' culture were the prime concerns of this group [33]. The adults reported in the studies reviewed did not identify with role models used to promote physical activity and people from this age group suggested that realistic exercise leaders would be more effective in encouraging participation [41]. The lack of realistic role models was also a problem for members of the South Asian and Black community [43]. This group did not see physical activity as a black or Asian pursuit, but rather as white, middle-class, male domain. The authors argue that there were few opportunities or facilities available to this group.

Self-perception is incredibly important in motivating people to participate in all types of physical activity. The stigma attached to being socially disadvantaged was shown to decrease exercise among low-income women in the Midlands [23]. Women in this study did not want others to see them walking due to the social stigma attached with not owning a car.

Arthur and Finch's [35] study of adults with disabilities found that few relevant or positive role models existed. Disabled men reported a lack of knowledge about the appropriate types or levels of activity in relation to their disability. Additionally there were few opportunities to meet other people who were active and disabled. This study also found that the dominance of masculine stereotypes in sport was a particular challenge to participation among gay men. These men expressed concerns about not fitting in and not being one of the 'lads'. Gay men reported withdrawing from organized sport due to feeling uncomfortable in the associated social situations [34].

Shaw and Hoeber's [44] discourse study of three English sports governing bodies reinforced the negative impact of macho culture in sport. Their study found that discourses of masculinity were predominant at all levels of the organization from coaching to senior management. The use of gendered language was shown to actively discourage women from advancing in these organizations. Discourses of femininity (characterized by loyalty, organizational, communicative and human resource skills) were associated with middle and lower management positions compared with masculine discourses (centered on elite coaching, competition and the imperative to win), which were associated with senior organizational roles.

Older adults

Some older adults were unsure about the 'right amount' of physical activity for someone of their age [38]. As in other age groups, the lack of realistic role models in the community was a deterrent. Exercise prescriptions were perceived as targeted at young people and not relevant to older groups. Porter [31] found that older people were anxious

about returning to physical activity and identified cost and time barriers as the main problems.

Discussion

This paper has reviewed the qualitative research into the reasons for participation and non-participation of UK adults and children in sport and physical activity. The review covered all qualitative papers relating to sport and physical activity in the United Kingdom from 1990 to 2004.

Although we did find >20 studies, few studies met the basic qualitative research quality criteria of reporting a theoretical framework [45]. It would appear that little theory is being generated empirically and suggests that any understanding of reasons for participation and non-participation in physical activity in the United Kingdom may be limited.

Shaw and Hoeber [44] provide one example of the benefits a theoretical framework brings to qualitative research in their analysis of the gendered nature of discourses in three national sporting bodies. Their feminist discourse analysis framework directed the research toward the particular forms of language used in a specific social setting and the implications of this language for marginalizing some groups while supporting the dominance of others. The authors used this framework to show how the masculine discourses used in senior positions actively reduced the career opportunities for women, while men were shown to be actively deterred from regional development officer posts by the feminine discourse surrounding these roles.

Motivations and barriers to participation

Fun, enjoyment and social support for aspects of identity were reported more often as predictors of participation and non-participation than perceived health benefits. For young children and teenage girls in particular, pressure to conform to social stereotypes is a key motivator. Along with older groups, children see enjoyment and social interaction with peers as reasons to be physically active. Although girls report a willingness to be active,

this must be on their own terms in a safe nonthreatening environment.

A clear opposition can be seen between girls wanting to be physically active and at the same time feminine [25] and the strong macho culture of school and extracurricular sport [46]. One area where the evidence base is strong is the negative impact which school PE classes have on participation of young girls. Changing PE uniforms, providing single sex classes and offering alternate, non-competitive forms of PE are easy, realistic ways in which PE could be changed and which the research suggests would improve long-term participation. Additionally, teachers need to take a more active role in ensuring that students are involved and enjoying PE classes. There appears to be some change in this area. The Youth Sports Trust/Nike Girls Project 'Girls in Sport' program involved 64 schools across England with the intention of creating 'girl-friendly' forms of PE and with changing school practices and community attitudes [47]. Preliminary results show changes in the style of teaching in PE, 'girlfriendly' changing rooms, positive role models for girls in sport, extended and new types of activities, relaxed emphasis on PE kit and an emphasis on rewarding effort as well as achievement.

A number of papers reviewed made the point that the role models for children and young adults are usually beautiful and thin in the case of women and muscular in the case of men. The desire to be thin and, in the case of girls, feminine, leads to increased motivation to be physically active [28]. This desire is not as strong in older populations and from the mid-20s on, role models with a perfect body have a negative effect on participation [43].

While the masculine nature of organized and semi-organized sport culture marginalizes women, this review has shown that groups of men are also marginalized. Robertson [34] has suggested a rethinking of youth sports and in particular the links between sport and masculine identities. Identity formation is a key transition in adolescence, and there is some evidence that physical activity advances identity development. Kendzierski [48] reported that individuals with an exercise self-schema (self-perception as a physically active per-

son) tended to be active more often and in more types of activity than those with a non-exercise schema (self-perception as not physically active). This relationship between leisure activity and identity may also be dependent on gender and the gendered nature of activities [49]. Alternate models of sporting clubs, such as those in which children can try a number of traditional and non-traditional sports in one place, could also provide improved take up and maintenance of participation.

Implications for the promotion of sport and physical activity

With the exception of the walking and cycling action plan, there appears to be little reference to empirical research on reasons for and barriers to participation in physical activity in government policy [11, 50–55]. The Department for Culture, Media and Sports (DCMS) acknowledge this gap in knowledge in their 'Game Plan' document:

... throughout the sport and physical activity sector the quality and availability of data on facilities, participation, long term trends, behavioural and other factors is very poor [11] (p. 14).

Our review has found some evidence of relevance to policy makers about why children and adults do or do not participate in sport and physical activity. Despite this there appears to be little reference to large population surveys and no reference to qualitative research in policy documents. Similar findings to those presented in this review have been observed in studies conducted in other countries. A qualitative study of participation in physical activity in Australia found similar motivating factors such as fun, enjoyment and socializing with friends and similar barriers including time constraints and negative pressure from peers [56]. Unless more recognition is paid to these factors it is no surprise that the effectiveness of current individual approaches to promote physical activity will remain short term and modest [57, 58]. Ongoing research for physical activity in the United Kingdom needs to develop theoretical frameworks to underpin health promotion interventions, programs and campaigns that draw on the existing evidence.

Little is known about the reasons why people do and do not participate in physical activity and the relationship between their levels of participation and different stages in their lives. A number of the papers reviewed [29, 34, 35] found that significant shifts in the life course have implications for participation in physical activity. A mix of quantitative and qualitative methods could build an evidence base to understand changes to sport and physical activity at critical transitional phases during childhood, adolescence and adult life. This review provides a starting point for new work.

Conclusion

This review has identified qualitative studies of the reasons for and barriers to participation in sport and physical activity. Participation is motivated by enjoyment and the development and maintenance of social support networks. Barriers to participation include transitions at key stages of the life course and having to reorient individual identities during these times. The theoretical and evidence base informing policy and health promotion is limited and more work needs to be done in this area.

Conflict of interest statement

None declared.

References

- Powell KE, Pratt M. Physical activity and health. Br Med J 1996; 313: 126–7.
- Batty D, Lee IM. Physical activity and coronary heart disease. Br Med J 2004; 328: 1089–90.
- 3. Batty D, Thune I. Does physical activity prevent cancer? Br Med J 2000: **321**: 1424–5.
- 4. Sallis JF, Owen N. *Physical Activity and Behavioral Medicine*. California: Sage, 1999.
- Kiess W, Galler A, Reich A et al. Clinical aspects of obesity in childhood and adolescence. Obes Rev 2001; 2: 29–36.
- Francis K. Physical activity in the prevention of cardiovascular disease. *Phys Ther* 1996; 76: 456–68.
- World Health Organisation. Obesity: Preventing and Managing the Global Epidemic. Geneva: WHO, 1997.
- 8. Chief Medical Officer. At Least Five a Week: Evidence on the Impact of Physical Activity and Its Relationship to

- Health: A Report from the Chief Medical Officer. London: Department of Health, 2004.
- Kopelman PG. Obesity as a medical problem. *Nature* 2000; 404: 635–43.
- 10. Zimmet P. The burden of type 2 diabetes: are we doing enough? *Diabetes Metab* 2003; **29**: S9–18.
- Department of Culture Media and Sports Strategy Unit. Game Plan: A Strategy for Delivering Government's Sport and Physical Activity Objectives. London: Cabinet Office, 2002
- 12. Allender S, Peto V, Scarborough P et al. Coronary Heart Disease Statistics. London: British Heart Foundation, 2006.
- 13. Joint Health Surveys Unit. *Health Survey for England 1998*. London: HMSO, 2004.
- 14. Petersen S, Peto V, Rayner M. Coronary Heart Disease Statistics. London: British Heart Foundation, 2004.
- Sport England. Driving up Participation in Sport—the Social Context, the Trends, the Prospects and the Challenges. London: Sport England, 2003.
- The Royal Parks. The Hub: The New Pavilion. Available at: http://www.royalparks.gov.uk/press/current/press_release_52. cfm. Accessed: 3 November 2005.
- Holm K, Li S, Spector N et al. Obesity in adults and children: a call for action. J Adv Nurs 2001; 36: 266–9.
- Thomas JR, Nelson JK, Silverman SJ. Research Methods in Physical Activity, 5th edn. Champaign, IL: Human Kinetics, 2005.
- Dixon-Woods M, Fitzpatrick R. Qualitative research in systematic reviews has established a place for itself. Br Med J 2001; 323: 765–6.
- Thomas JR, Nelson JK. Research Methods in Physical Activity, 3rd edn. Champaign, IL: Human Kinetics, 1996.
- MacPhail A, Gorley T, Kirk D. Young people's socialisation into sport: a case study of an athletics club. Sport Educ Soc 2003; 8: 251–67.
- Mulvihill C, Rivers K, Aggleton P. Physical Activity 'At Our Time': Qualitative Research among Young People Aged 5 to 15 Years and Parents. London: Health Education Authority, 2000
- 23. Bostock L. Pathways of disadvantage? Walking as a mode of transport among low income mothers. *Health Soc Care Community* 2001; **9**: 11–8.
- 24. Porter S. *Physical Activity: An Exploration of the Issues and Attitudes of Parents of pre Fives.* London: Scott Porter Research and Marketing, 2002.
- Cockburn C, Clarke G. "Everybody's looking at you!": Girls negotiating the "femininity deficit" they incur in physical education. Womens Stud Int Forum 2002; 25: 651–65.
- Finch H, White C. Physical Activity 'What We Think': Qualitative Research among Women Aged 16 to 24. London: Health Education Authority, 1998.
- 27. Porter S. *Physical Activity: An Exploration of the Issues and Attitudes of Teenage Girls*. London: Scott Porter Research and Marketing, 2002.
- Flintoff A, Scraton S. Stepping into active leisure? Young women's perceptions of active lifestyles and their experiences of school physical education. Sport Educ Soc 2001: 6: 5–21.
- Coakley J, White A. Making decisions: gender and sport participation among British adolescents. Sociol Sport J 1992; 9: 20–35.

- 30. Crone-Grant DM, Smith RA. Broadening horizons: a qualitative inquiry on the experience of patients on an exercise prescription scheme. *J Sports Sci* 1999; **17**: 12.
- 31. Porter S. *Physical Activity: An Exploration of the Issues and Attitudes of Men in Mid Years*. London: Scott Porter Research and Marketing, 2002.
- 32. Singh S. Why are GP exercise schemes so successful (for those who attend)? Results from a pilot study. *J Manag Med* 1997: **11**: 233–7.
- 33. Crone-Grant DM, Smith RA. Exercise adherence: a qualitative perspective. *J Sports Sci* 1998; **16**: 75.
- Robertson S. 'If I let a goal in, I'll get beat up': contradictions in masculinity, sport and health. *Health Educ Res* 2003; 18: 706–16.
- 35. Arthur S, Finch H. *Physical Activity in Our Lives. Qualitative Research among Disabled People*. London: Health Education Authority, 1999.
- Smith SL. Athletes, runners, and joggers: participant-group dynamics in a sport of "individuals". *Sociol Sport J* 1998; 15: 174–92.
- Hardcastle S, Taylor A. Looking for more than weight loss and fitness gain: psychosocial dimensions among older women in a primary-care exercise-referral program. J Ageing Phys Act 2001; 9: 313–28.
- 38. Finch H. *Physical Activity 'At Our Age': Qualitative Research among People over the Age of 50*. London: Health Education Authority, 1997.
- Stathi A, McKenna J, Fox K. The experiences of older people participating in exercise referral schemes. J R Soc Health 2003; 124: 18–23.
- 40. Cooper L, Thomas H. Growing old gracefully: social dance in the third age. *Ageing Soc* 2002; **22**: 689–708.
- Crone-Grant DM, Smith RA. Exercise referral schemes in public and private leisure: a qualitative investigation. J Sports Sci 2001: 19: 19.
- 42. Orme J. Adolescent girls and exercise: too much of a struggle? *Educ Health* 1991; **9**: 76–80.
- 43. Rai D, Finch H. *Physical Activity 'From Our Point of View'*. London: Health Education Authority, 1997.
- 44. Shaw S, Hoeber L. "A strong man is direct and a direct woman is a bitch": gendered discourses and their influence on employment roles in sport organizations. *J Sport Manage* 2003; **17**: 347–75.

- Mays N, Pope C. Qualitative research in health care: assessing quality in qualitative research. Br Med J 2000; 320: 50–2.
- Bramham P. Boys, masculinities and PE. Sport Educ Soc 2003; 8: 57–71.
- Institute of Youth Sport. Innovative Practice in School-Based Programmes: Girls in Sport Project. Available at: http://www.lboro.ac.uk/departments/sses/institutes/iys/pages/research3.1.html. Accessed: 11 November 2005.
- Kendzierski D. Schema theory: an information processing focus. In: Dishman RK (ed). Advances in Exercise Adherence. Champaign, IL: Human Kinetics, 1994, 137–59.
- Shaw SM, Kleiber DA, Caldwell LL. Leisure and identity formation in male and female adolescents—a preliminary examination. J Leisure Res 1995; 27: 245–63.
- Department of Health. On the State of Public Health. Chief Medical Officer's Annual Report 2003. London: Department of Health. 2004.
- Department of Culture Media and Sports. A Sporting Future for All. The government's strategy for sport. London: HMSO, 2000.
- Department of Health. At least Five a Week: A Report from the Chief Medical Officer. London: Department of Health, 2004.
- 53. Department of Health. *Choosing Health? Choosing Activity. A Consultation on How to Increase Physical Activity.* London: Department of Health, 2004.
- 54. Department of Transport. *The Future of Transport—White Paper*. London: HMSO, 2004.
- 55. Department of Transport. Walking and Cycling: An Action Plan. London: HMSO, 2004.
- 56. O'Dea JA. Why do kids eat healthful food? Perceived benefits of and barriers to healthful eating and physical activity among children and adolescents. J Am Diet Assoc 2003: 103: 497–504.
- Hillsdon M, Foster C, Thorogood M. Interventions for Physical Activity (Cochrane Review). In: *The Cochrane Library*. Oxford: Update Software, 2005.
- 58. Hillsdon M, Foster C, Cavill N et al. A Review of the Evidence on the Effectiveness of Public Health Interventions for Increasing Physical Activity amongst Adults: A Review of Reviews. London: Health Development Agency, 2005.

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