physical activity and inequalities

Summary

- Inequality relates to differences in various aspects of health across various groups (e.g. social class, gender, ethnicity and disability).
- There is evidence for significant and enduring inequalities in various aspects of health (e.g. health behaviours, morbidity and mortality).
- There are significant inequalities in the levels of physical activity in relation to age, gender, ethnicity and disability.
- Those living in the most deprived areas are least likely to meet current physical activity recommendations. However, this is more complicated when looking at different types of physical activity, e.g. walking, sports and activity at work as well as across different genders (though there is evidence of inequalities in relation to formal sports participation and vigorous activity).
- There have been two broad approaches to work around physical activity and inequality: and another that attempts to use physical activity as a means of redressing wider inequalities in aspects of health (for example in relation to coronary heart disease, obesity and mental health).
- Actions to tackle inequalities need to exist at several levels, for example:
  - structural: addressing the cultural and environmental forces that create health and physical activity inequalities (e.g. developing appropriate physical activity facilities and opportunities, improving various aspects of access)
  - individual: increasing knowledge and promoting motivation amongst those disadvantaged.

The nature and determinants of inequality

Inequality relates to differences in the health profile of one group compared with another. The term inequity is sometimes used to express differences that are considered unnecessary, avoidable and recoverable via interventions. These inequalities are structured around a range of sub-groups and expressed in relation to various ‘target areas’, expressed in Table 1.

Table 1: How inequalities are expressed

<table>
<thead>
<tr>
<th>Possible societal sub-groups</th>
<th>Possible target areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socioeconomic class</td>
<td>Employment</td>
</tr>
<tr>
<td>Levels of ‘deprivation’</td>
<td>Income</td>
</tr>
<tr>
<td>Age</td>
<td>Wealth</td>
</tr>
<tr>
<td>Gender</td>
<td>Educational attainment</td>
</tr>
<tr>
<td>Disability</td>
<td>Within health</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Life expectancy</td>
</tr>
<tr>
<td>Geographical location (comparisons at local, national and international level)</td>
<td>Levels of illness and disease</td>
</tr>
<tr>
<td></td>
<td>Measures of mental and social health</td>
</tr>
<tr>
<td></td>
<td>Health behaviours (e.g. levels of smoking, alcohol consumption, diet and physical activity)</td>
</tr>
</tbody>
</table>
A degree of consensus exists around the forces that create health and wellbeing and inequalities. The model below reflects the breadth of these determinants.


The key feature of this model is the notion of inequalities being the product of influences ranging from the deep and profound (general social conditions) through the intermediate (social and community cultural influences) to the more grounded behaviour of people (individual lifestyle). Hanlon et al. (2005) suggested that there is evidence in the Scottish context that deep and profound social forces had a relatively less significant impact on variations in health status in 2001 than they did in 1981, pointing to the possibility that cultural and behavioural forces had become more important over the intervening years.

**Scotland’s current policy on health and physical activity inequalities**

Redressing inequalities has become a central component of Scottish policy. A range of general initiatives exist: Closing the Opportunity Gap provides an overarching framework for this field, encompassing inequalities in employment opportunities, education, financial security and health; the Fair for All policy approach enshrined the right of people to access health services independent of age, gender, ethnicity, disability, religion, sexual orientation, mental health status or economic circumstances; the NHS Reform (Scotland) Act complemented this by imposing duties of ‘public involvement’ and ‘equal opportunities’ on public bodies including NHS boards.

In relation to health inequalities, 1999’s *Towards a Healthier Scotland* set an important starting point stressing that, ‘crucial to our aim of good health for all is our drive to address the inequalities.’ This sentiment has subsequently been restated in a range of statements: *Our National Health: A Plan for Action, A Plan for Change* (2001) placed the NHS, local authorities and the community planning process at the centre of efforts to tackle inequalities; *Improving Health in Scotland – The Challenge* (2003) established tackling health inequalities as an ‘overarching aim’ and recommended a range of inequality targets based on various indicators; *Partnerships for Care* (2003) established a ‘targeting’ principle of having a focus on the social groups most ‘at risk’; and *Delivering a Healthy Scotland: Meeting the Challenge* (2006) assembled and re-enforced these themes and applied them to the key topic-based health improvement programmes, including physical activity. Tackling inequalities has also been expressed in physical activity policy. Within the expectations set at the establishment of the Physical Activity Task Force in 2001 was the task of ‘investigating and recommending ways to use
physical activity to reduce health inequalities’ and this was reflected in one of the key values set in 2003’s Let’s Make Scotland More Active: A Strategy for Physical Activity, namely that physical activity provision should be based on ‘equal opportunities and access, regardless of age, sex, race, religion, social class, ability, disability, health status or geographic location’. While no specific targets have been set for reducing inequalities in physical activity, there are in the related areas of coronary heart disease and cancer. Building a Better Scotland (2004) set the following targets: to reduce health inequalities by increasing the rate of improvement for under-75 coronary heart disease mortality and under-75 cancer mortality (1995–2003) in the most deprived communities by 15% by 2008.

The evidence

Trends in broad inequalities

Although we have seen improvements in health across the whole population, increasing disparities are concealed within it; Hilary Graham and Mike Kelly note:

while the health of the population as a whole may be improving, the health of the least and less well off either improves more slowly than the rest of the population or in some cases gets worse in absolute terms.¹

Such general inequalities may be made worse by additional inequalities within these groups in relation to gender, disability and ethnicity.

The bulk of evidence suggests that inequalities in the various combinations suggested above have increased since the 1980s within Scotland and the UK and continue to do so. This has been particularly noticeable in income levels, where three-quarters of the extra income created in the UK over the last decade has gone to those with above average incomes—those in the top fifth of households earn four times that of those in the bottom fifth².

It is also recognised that inequalities in health are particularly wide and have been relatively unaffected by interventions. Inequalities in life expectancy and behaviours such as smoking and alcohol consumption are noted across the related features of social class and geographical location. For example, life expectancy remains over seven years more for professional men than for those in unskilled manual groups and a 10-year gap exists between those in the local authority with the lowest life expectancy, Glasgow City (69 years), and the highest, North Dorset (79 years). The literature also highlights the fact that such health inequalities also exist in relation to gender, ethnicity and disability.³

Trends in inequalities: physical activity

Adult levels of physical activity show significant variation across various dimensions. Inequalities in relation to age and gender are well marked; there is a significant decline in activity with age and men tend to be more active than women. The picture in and around social class, however, is much more complex. Compared with other health behaviours, measures of achievement of the recommended levels of general physical activity in Scotland do not show any significant social class gradient in either men or women (see Table 2 overleaf).

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Table 2: Proportion meeting the current physical activity recommendations by socioeconomic class and sex (standardised for age)

<table>
<thead>
<tr>
<th>Socioeconomic class</th>
<th>Man</th>
<th>Woman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial &amp; professional</td>
<td>42</td>
<td>32</td>
</tr>
<tr>
<td>Intermediate</td>
<td>47</td>
<td>33</td>
</tr>
<tr>
<td>Small employers and own account workers</td>
<td>47</td>
<td>35</td>
</tr>
<tr>
<td>Lower supervisory and technical</td>
<td>45</td>
<td>30</td>
</tr>
<tr>
<td>Semi-routine and routine</td>
<td>40</td>
<td>27</td>
</tr>
</tbody>
</table>

A similar pattern emerges when this measure is considered in relation to measures of deprivation. Levels of physical activity are relatively consistent across deprivation groups, apart from the most deprived fifth of the population, in which activity levels do decline significantly (Table 3).

Table 3: Proportion meeting the current physical activity recommendations by Scottish Index of Multiple Deprivation quintile and sex (standardised for age)

<table>
<thead>
<tr>
<th>Scottish Index of Multiple Deprivation quintile</th>
<th>1st (least deprived)</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th (most deprived)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>41</td>
<td>41</td>
<td>48</td>
<td>45</td>
<td>35</td>
</tr>
<tr>
<td>Woman</td>
<td>32</td>
<td>33</td>
<td>30</td>
<td>30</td>
<td>26</td>
</tr>
</tbody>
</table>

This absence of any gradient has been attributed to various factors, for example relatively high levels of activity in manual occupations and the tendency for more deprived groups not to have access to cars, thus a tendency to walk more.

More defined social class and deprivation area gradients can however be detected when sports participation (excluding walking) is considered. Here we see a general decline in sports participation across social class (from 67% in social class AB to 61% in class C1 to 54% in class C2 to 41% in class DE) and a difference across deprivation areas (57% being active in sport in areas not defined as ‘deprived’ by the Scottish Index of Multiple Deprivation compared with 44% of people in such deprived areas). Within this analysis, there are however some significant gender and age variations, for example there is little social class differentiation in sports participation in the male age group 16–24 years.

The same age and gender inequalities have been noted among young people. Physical activity levels decrease with age and boys are more active than girls across all age groups (Table 4). Like adults, in relation to simply meeting current physical activity recommendations, there is no identifiable social

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4 From Scottish Health Survey 2003, p.147.
5 By the Scottish Index of Multiple Deprivation (SIMD).
6 From Scottish Health Survey 2003, p.147.
class gradient among young people 2–15 years. Indeed, as indicated in Tables 5 and 6 below, the proportion of those meeting this level is actually higher in boys and girls in lower supervisory and technical/semi-routine and routine classes and in more deprived areas.

Table 4: Proportion meeting the current physical activity recommendations by socioeconomic class and sex

<table>
<thead>
<tr>
<th>Socioeconomic class</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial &amp; professional</td>
<td>76</td>
<td>58</td>
</tr>
<tr>
<td>Intermediate</td>
<td>76</td>
<td>66</td>
</tr>
<tr>
<td>Small employers and own account workers</td>
<td>69</td>
<td>57</td>
</tr>
<tr>
<td>Lower supervisory and technical</td>
<td>79</td>
<td>68</td>
</tr>
<tr>
<td>Semi-routine and routine</td>
<td>73</td>
<td>68</td>
</tr>
</tbody>
</table>

Table 5: Proportion meeting the current physical activity recommendations by Scottish Index of Multiple Deprivation quintile and sex

<table>
<thead>
<tr>
<th>Scottish Index of Multiple Deprivation quintile</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st (least deprived)</td>
<td>76</td>
<td>61</td>
</tr>
<tr>
<td>2nd</td>
<td>73</td>
<td>63</td>
</tr>
<tr>
<td>3rd</td>
<td>75</td>
<td>64</td>
</tr>
<tr>
<td>4th</td>
<td>80</td>
<td>68</td>
</tr>
<tr>
<td>5th (most deprived)</td>
<td>76</td>
<td>67</td>
</tr>
</tbody>
</table>

A social class-related gradient can however be detected when vigorous physical activity is assessed. Using the notion of ‘family affluence scale’, Inchley et al. (2005) show that those young people in relatively affluent families tend to be more active than those who are less affluent and that this gradient is particularly pronounced in girls.

Data on physical activity inequalities across ethnic grouping and in relation to disability are scarce in the Scottish context. Wider UK evidence does however point to the fact that:

- Those from South Asian and Chinese communities are less active in both general ‘active living’ and sport and exercise compared with the general population. Those from Bangladeshi communities are particularly inactive, achieving only 50% of the activity of the general population. This picture is also repeated among children from ethnic minority communities with girls from Indian, Pakistani and Bangladeshi backgrounds having particularly low levels of activity. Boys from an Afro-Caribbean background attain higher levels of activity than the general population.
- Those who are disabled are relatively less active and disability is frequently cited as a significant barrier to physical activity, particularly by older people.

8 From Scottish Health Survey 2003, p.105
9 From Scottish Health Survey 2003, p.105
10 See Inchley et al. (2005).
Implications for practice

Broad approaches to tackling health inequalities
A range of broad possibilities are offered:

- interventions that seek to reduce deep disadvantage in various respects: socioeconomic, age, gender and ethnicity (e.g. fiscal policy, income support, pensions and benefits)
- interventions that promote social inclusion (expanding work and educational opportunities, promoting community networks)
- interventions on individual behavioural factors that mediate the effect of socio-economic disadvantage (e.g. specific interventions that develop health-related skills, health literacy and mechanisms of behaviour change)
- interventions to improve accessibility and quality of health care (e.g. new facilities, more accessible opening hours).

In addition, two potential approaches to delivering such activity are identified: a comprehensive approach that addresses action across all of the population and the whole social gradient and a more targeted response that focuses on those most disadvantaged, in the poorest health and in the poorest circumstances. In this context, Graham and Kelly (2005) note that the ‘determinants of health’ may not be the same as the ‘determinants of health inequalities’, highlighting the fact that unfocused action on major determinants of health such as smoking and physical activity may lead to the creation of even greater inequalities (i.e. interventions may be relatively more successful in groups who are already ‘advantaged’). In this sense, they advocate the need to adopt a targeted approach that addresses the ‘unequal distribution of determinants’ in relation to the dimensions that might account for such inequalities, such as gender, ethnicity, and disability.

Using physical activity to address health inequalities
A notion exists that physical activity can be used to redress wider health inequalities. While there is little evidence of a social class gradient for physical activity per se, there is for coronary heart disease, cancer and mental health, and the belief is that further increases in levels of physical activity in lower socioeconomic groups could help offset such gradients. As well as these physiological benefits, in theory targeted physical activity promotion schemes are believed to offer a range of wider potential health benefits, including the promotion of various forms of community networks and individual social inclusion, the provision of alternatives to harmful activities involving drug use, self-harm, antisocial behaviour and crime and the creation of respite opportunities for carers.11

Tackling inequalities in levels of physical activity
Based on the perception of inequalities in levels of physical activity in various groups, a range of options are offered as specific actions that may redress these inequalities. Physical activity-specific interventions are based upon perceptions of a range of barriers that can potentially create inequalities in relation to, variously, socioeconomic class, gender, ethnicity and potential combinations (i.e. the notion of multiple disadvantage or discrimination). A range of impediments particularly related to those disadvantaged can be identified:

- a relatively low level of knowledge about the benefits of physical activity
- relatively low levels of motivation to be physically active

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11 Some are however sceptical of this possibility. Isolated behavioural interventions undertaken in the absence of wider social, economic and environmental actions do not fundamentally address the root determinants that create health and physical activity inequalities. The use of such tactics therefore needs to exist within a broader approach that addresses more profound determinants concurrently. Nor is there evidence that sport in isolation (particularly football) can be used as a vehicle for health improvement and social inclusion. Indeed, in the context of a one-dimensional non-targeted approach, some suggest that efforts to indiscriminately promote physical activity may lead to a widening of health inequalities.
• explicit discrimination on the basis of race, gender and social class, for example invisible bars on entry to sports clubs
• a shortage of facilities and opportunities for physical activity in areas of disadvantage, for example there are relatively few facilities in areas of deprivation and there are concerns for safety (traffic, limited safe play areas, fear of abduction)
• a shortage of affordable facilities and opportunities
• a shortage of socially and culturally sensitive facilities, for example, in relation to personally and culturally sensitive activities, lack of changing privacy, inappropriate opening hours, lack of single sex provision, activities that are inappropriate to need, insensitivity to cultures regarding recognise dress codes
• lack of parental/family support, for example financial, transport and general encouragement.

Recognition of these barriers forms the basis of a range of measures that could contribute towards reducing inequalities in levels of physical activity in relation to social class, gender, ethnicity and disability.

**Actions to address broad structural determinants — including policy and environmental measures**

• Create a policy context within which addressing inequalities in physical activity across groups are accepted and prioritised and explicit targets are set and monitored.
• Develop strategies targeted at those experiencing inequality (young women, older people, ethnic minority groups), including ‘territorial’ approaches or strategies in targeting ‘deprived’ areas.
• Develop new partnerships with groups and professionals who have relevance and access to disadvantaged groups, for example the Patient Focus and Public Involvement agenda recognises the importance of involving people in developing services.
• Make the environment safer and more attractive so that more people can be active outdoors.
• Increase the provision of affordable community sports and physical activity programmes and facilities to levels similar to those in more advantaged communities.
• Accommodate and achieve these specific actions through an Equality and Diversity Impact Assessment, which all public sector bodies are required to carry out when planning a new policy or service.

**Actions to deliver physical activity-based services and interventions that will redress inequality**

• Pay attention to the needs of hard-to-reach and disadvantaged groups, finding activity types that suit people and are socially and culturally acceptable.
• Involve the identified communities in the development and implementation of plans.
• Offer ‘tailored’ activities.
• Provide personalised assistance and ongoing support for activity (for example the notion of ‘physical activity facilitators’ in primary care).
• Offer useable and affordable transport to physical activity opportunities.
• Provide outreach work with those in disadvantaged groups.
• Ensure that staff are trained and familiar with the concept of equal opportunities.
• Encourage family-based and group activity.
• Prioritise early years groups.

A range of practical examples of such work exists. The use of exercise referral schemes in primary care is particularly highlighted. *Delivering a Healthy Scotland: Meeting the Challenge* specifically suggests that such schemes can effectively tackle health inequalities by, ‘proactive, preventative care’ and the Keep Well programme delivers primary care-based health improvement interventions in deprived communities.
Case study: the Girls on the Move programme

This programme is designed to increase the physical activity levels of girls and young women by addressing the barriers that prevent them from participating in activity. It aims to give girls and young women opportunities to achieve social, psychological and physical benefits possible through physical activity. The Robertson Trust and the Scottish Government Improvement Budget fund the programme.

The programme objectives are:

- to improve the physical activity levels of girls and young women participating in the programme
- to engage harder to reach groups including girls displaying ‘at risk’ behaviour, girls with disabilities or mental health issues, and young mothers and girls from ethnic minorities in positive physical activities
- to involve more young women as leaders in physical activities for girls.

Evaluation of the programme concludes that it is fulfilling its broad aim to give girls and young women the opportunity of achieving the social, psychological and physical benefits possible through physical activity. In particular, it is providing opportunities for girls to take part in activities that would otherwise not be available to them.

In addition, three main objectives are being fulfilled:

1. To improve the physical activity levels of girls and young women participating in the programme

   The programme is increasing the physical activity levels of some girls. One-fifth of the girls had not taken part in any activities in their free time in the seven days before they started the programme, with 38 per cent indicating that they had only taken part on one or two occasions. This indicates that the programme is reaching inactive girls or those with low levels of activity.

2. To engage harder to reach groups including girls displaying ‘at risk’ behaviour, girls with disabilities or mental health issues, and young mothers and girls from ethnic minorities in positive physical activities

   The projects are reaching target groups whose participation in activities is known to be lower than the national average. For example, a proportionally higher proportion of girls were from areas of deprivation: 31 per cent of girls were from the 20 per cent most deprived areas in Scotland according to the Scottish Index of Multiple Deprivation. In addition, around one in ten projects are targeted at girls from ethnic minority communities, while several projects have been targeted at young mothers.

3. To involve more young women as leaders in physical activities for girls

   The programme is preparing young women to take on leadership roles within their own communities. Since the programme began in 2005, 127 young women have graduated from the leadership course, 67 per cent of whom have since been active as leaders, in paid and voluntary capacities.

   A number of factors are perceived as important in contributing to the programme’s success:

   **Girls only**

   The fact that the project activities are open only to girls is a factor that attracts many of the participants. Girls and organisers have commented on the importance of the girls being able to take part in activities without the involvement or distraction of boys.
Diversity of activities

Although the most popular type of activity is dance, a broad range of activities is being delivered at projects. This variety of activity appears to be important in attracting and maintaining girls’ interest.

Girls involvement in planning project activities

The need for girls to be involved in the planning stage is an important aspect of good practice. This ensures that the activities are those that the girls are most likely to take part in.

Academic publications and resources

General health inequalities


Physical activity inequalities


Inequalities data


National Statistic Online. Focus on Social Inequalities www.statistics.gov.uk/focuson/socialinequalities/default.asp


Policy documents


**Relevant resources**


**Supporting agencies & websites**

Closing the Opportunity Gap
Sets out The Scottish Government's commitment to tackling poverty and disadvantage through our Social Justice strategy with associated aims, objectives and targets.
www.scotland.gov.uk/Topics/People/Social-Inclusion/17415/opportunity

CHEX
Is the leading agency in Scotland's health sector that provides a resource in supporting community development approaches to health improvement and challenging health inequalities.
www.chex.org.uk/

The National Center on Physical Activity and Disability
www.ncpad.org/