LONDON 2012: A UNIQUE OPPORTUNITY TO PROMOTE PHYSICAL ACTIVITY IN ETHNIC MINORITY CHILDREN?

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London 2012: a unique opportunity to promote physical activity in ethnic minority children?

Executive Summary

The health benefits of physical activity are well documented in both adults and children, and yet only a small proportion of children achieve the recommended 60 minutes of moderate to vigorous physical activity per day. Activity levels are particularly low among ethnic minority groups, who are also at increased risk of chronic diseases such as hypertension, diabetes and cardiovascular disease. Promoting healthy lifestyles among ethnic minority populations is a public health priority which could contribute to reducing health inequalities.

In the bid for the 2012 Olympic Games, the anticipated lasting benefits for the UK population, collectively termed the ‘Legacy’ of the games, were outlined. Increase in physical activity was proposed as one of these expected benefits. Evidence supporting a positive influence of the Olympic Games on physical activity levels is lacking, however, this is due to the lack of rigorous evaluation of activity levels before and after previous Games and the lack of Olympic-related physical activity interventions by previous host nations. Essentially, the question of whether or not the Games can be used to increase physical activity has not been answered.

Interventions aimed at increasing physical activity often lack underlying strategies to increase effectiveness amongst ethnic minority groups, and the effectiveness of the Olympics in facilitating increase in physical activity in ethnic minority groups is unknown. The purpose of this report is to
review the evidence and highlight key principles regarding the potential use of London 2012 as a catalyst for promoting physical activity in ethnic minority children.

Evidence suggests there are several key principles to engage ethnic minority groups in physical activity. These include: identifying the cultural-specific perceptions regarding barriers to activity; taking into account the perceptions of community members in the design and development of intervention components; increasing the awareness of, and access to, sports facilities and clubs in the local area, especially those which incur little or no cost and ensure that such facilities remain accessible on a long-term basis; utilising ethnic minority role models to disseminate healthy lifestyle messages, and where possible, they should be local role models who are able to develop a relationship with the schools and local community; encouraging parents and family to be involved; incorporating school, community and religious settings in the delivery; providing facilities and resources in languages specific to the ethnic make-up of the school and community populations.

Interventions aimed at promoting physical activity through London 2012 should consider incorporating these principles to extend the benefits to all ethnic groups. Looking beyond London 2012, future research evaluating interventions to increase physical activity through major sports events need to be more rigorously designed and report findings by gender and ethnic group in an attempt to reveal the most effective strategies among these subgroups.
Introduction

The health benefits of regular physical activity are wide ranging and well documented in both adults and children.\textsuperscript{1-3} It is estimated that as many as 1.9 million deaths worldwide are attributed to physical inactivity each year.\textsuperscript{1} Higher levels of physical activity are associated with reduced risk of many chronic diseases including hypertension, type two diabetes mellitus (T2DM), cardiovascular disease (CVD) and obesity.\textsuperscript{4-6} Physical activity has also been associated with improvements in psychosocial factors such as self-esteem, academic performance, risk of anxiety and depression.\textsuperscript{7,8} The current physical activity guidelines recommend that children take part in at least 60 minutes per day of moderate to vigorous intensity physical activity in order to achieve these health benefits.\textsuperscript{9,10} However, an overwhelming proportion of UK children fail to meet these recommendations,\textsuperscript{11} and levels of physical activity are known to decline with age.\textsuperscript{12-14}

Importantly, there are substantial ethnic variations in activity levels among children. Significantly lower levels of physical activity have been reported in UK South Asian children when compared with white British children.\textsuperscript{15,16} This tendency toward a sedentary lifestyle, along with notably high prevalence of childhood obesity, is particularly worrying in ethnic minority groups in which the risk of obesity-related co-morbidities and mortality is elevated.\textsuperscript{17-19} As a whole, ethnic minority groups are more likely to report ill health than the general population,\textsuperscript{20} and many ethnic groups are at elevated risk of T2DM, hypertension\textsuperscript{21} and coronary heart disease\textsuperscript{20} when compared with the white British population. These health inequalities have also been observed in ethnic minority children and adolescents.\textsuperscript{22,23}

The chronic diseases associated with inactivity are known to track into adulthood\textsuperscript{24} and are becoming more and more common among children and young people.\textsuperscript{25-28} As a result, it has been suggested that the best strategy for improving the long term health of children and adolescents is to encourage a lifestyle pattern of regular physical activity, which can be maintained throughout life.\textsuperscript{29} Therefore, it is essential that effective strategies are identified in order to achieve sustainable improvements in activity levels.

In the bid for the 2012 Olympic Games, the anticipated lasting benefits of a successful bid, collectively termed the ‘Legacy’ of the games, were outlined. These ranged from employment opportunities and economic gains to health improvements and increased provision of sports facilities for local communities. Among the proposed benefits was the contribution of the Games
to the Governments’ physical activity and health agenda. It was suggested that the Games would act as ‘the catalyst that inspires people of all ages and all talents to lead more active lives’.30

A recent systematic review assessing the health and socioeconomic impacts of major multi sports events found very little evidence for improved health outcomes or increased physical activity in the host nations of previous Games.31 However, a review commissioned by the Department of Health32 highlighted two key reasons for the lack of support for increased physical activity and sports participation following previous Olympic events. Firstly, there has been no evidence collected with respect to physical activity levels of host nations before and after the Games, or in cases where evaluation was attempted the methodology has been weak. Secondly, no real attempt has actually been made to use the Games to inspire behaviour change in relation to physical activity or sports participation. Essentially, the question of whether or not the Games can be used to increase sports participation and physical activity at a population level has not really been addressed.

It was previously anticipated that hosting the 2012 Olympics would create a unique opportunity to encourage active lifestyles and sports participation among the UK population, and perhaps more so in ethnic minority groups, and those of low socioeconomic status, who may face more barriers to sports and physical activity than the general population. However, previous research has shown that the anticipated influence of the Games, referred to as the ‘trickle-down effect’ in previous literature, will not occur automatically;32,33 supporting initiatives and interventions are likely to be needed.

The purpose of this report is to stimulate ideas and discussion regarding the potential use of London 2012 as a catalyst for promoting physical activity in ethnic minority children.
Overview of previous research in promoting physical activity among ethnic minority groups

A recent Cochrane review on the effectiveness of multi-component, community-wide interventions suggests that, in general, these interventions have failed to produce increase in physical activity at the population level.\textsuperscript{34} However, one of the interesting findings of this review was the lack of subgroup analyses included in the evaluation of these interventions, which makes it impossible to determine whether or not these strategies, or specific components of these strategies, are effective among certain ethnic groups. In contrast, Kahn et al, in an earlier systematic review of physical activity interventions, found evidence to suggest that community-based interventions can be effective, as long as they are tailored to the local population.\textsuperscript{35}

Some of the perceived barriers to physical activity in ethnic minority groups are also common to those of low socioeconomic status, such cost, lack of time, lack of transport and lack of awareness of facilities.\textsuperscript{36} Interestingly though, a health promotion intervention aimed at preventing obesity in children from low socioeconomic families in Germany found that the intervention was only effective in non-immigrant groups, which suggests that cultural adaptation of health promotion strategies may be required.\textsuperscript{37}

As most previous physical activity interventions have lacked cultural adaptation, a study by Van Duyn et al (2007), in which focus groups were conducted with ethnic minority groups in the US, aimed to ascertain the best strategies for adapting evidence-based interventions to ethnic minority groups.\textsuperscript{36} They demonstrated the need for strategies to be tailored for cultural relevance across different ethnic groups. Increasing social support for physical activity was perceived to be the most important strategy, closely followed by improving access to sports venues and leisure facilities in the local community, especially those which incur little cost. The benefits of involving the community during the planning and developmental stages of interventions were also highlighted. Focus group participants supported the use of role models from similar ethnic backgrounds as a particularly good way of disseminating health messages. They also drew attention to issues regarding lack of motivation to attend physical activity events in the community if they were only perceived as one-off events rather than an on-going program. Other barriers to accessing physical activity resources were financial restraints, safety (due to high crime rates and poor infrastructure) lack of time or transportation, and lack of walking trails and cycle paths.
Other intervention studies have also had success in conducting focus groups to aid tailoring of an intervention to the local community and ensuring acceptability of intervention components among ethnic minorities. Social expectations and cultural norms have been identified as key barriers to participation among South Asian women, and one study has reported higher participant satisfaction for a culturally adapted intervention, which may be an influential factor in sustainable behaviour change. These findings suggest that cultural adaptation of interventions may be effective, however, it must be noted that due to the lack of research comparing culturally adapted versus non-adapted interventions the importance of cultural adaptation is unclear.

Studies have shown that declines in physical activity are most apparent during childhood and adolescence, with the fastest rate of decline in Asian girls. Therefore, Olympic-related interventions aimed at encouraging physical activity may be most effective, in the long term, if aimed at children. By encouraging children to get involved in sports that they enjoy, and are therefore likely to participate in for years to come, there is the potential for long lasting impact on cardiovascular and psychosocial health.

Another recent Cochrane review summarised the evidence on the effectiveness of school-based physical activity interventions. They found that a combination of printed educational materials and changes to the school curriculum which promote physical activity can result in improvements in VO2max and duration of physical activity, and reductions in time spent watching television, particularly in primary school aged children. Again, despite the fact that most of the school-based physical activity interventions included children of various ethnic backgrounds, none of these studies conducted subgroup analyses beyond age and gender, so the authors of the review were unable to come to any conclusions about the most effective strategies for ethnic minority groups. With regards improvements in physical activity rates, a notable difference between effective and non-effective interventions was the use of P.E. teachers to deliver most of the intervention in the former, as opposed to teachers of other subjects. All of the studies which saw a positive intervention effect on physical activity duration included promotion of activity through the school curriculum, and delivery of the intervention by a range of providers.

A recent study in Birmingham, the Birmingham healthy eating and active lifestyle for children study (BEACHeS), developed and piloted an obesity prevention intervention focussing specifically on South Asian children. The intervention aimed to prevent obesity through lifestyle modification, such as increasing physical activity and promoting healthy eating in South Asian children. The multi-component intervention developed through BEACHeS was informed by the results of focus group sessions with local stakeholders, such as parents, teachers, school staff and
local authority representatives. The final intervention package, designed through the information gathered during these focus groups, was school and community-based, actively encouraged parental involvement, was tailored to the local environment and utilised role models via the Villa Vitality scheme run by Aston Villa Football Club and local PCTs which educates children on the importance of a healthy lifestyle. Involving members of the local South Asian community in the design and development of intervention components ensured that the intervention was well received by participants and generated positive feedback from teachers, children and parents alike. These key principles can be used to inform Olympics-related interventions aimed at increasing activity in ethnic minority children.

A 12 week after school program to increase activity in African Caribbean children and their parents also showed promising results. Interestingly, they found that improvements in activity levels and fitness were greater in the parents than in children, which suggests that interventions focusing on school-aged ethnic minority children may also be an effective way to target parents and/or family members.

Religious leaders can act as key role models and have the respect of the local community, which makes them an effective method of delivering intervention messages. Resnicow et al reported improvements in physical activity following a church-based intervention targeting African-Americans, and a randomised controlled trial of a faith-based physical activity intervention targeting sedentary African American women has reported promising results with regards physical activity outcomes. Women in the intervention group had a significantly higher change in activity when compared with the control group, as measured by pedometer. This is the first faith based RCT reporting positive impact on activity levels in African-Americans, and suggests that religious institutions can be influential in health behaviour change in this population. The additional benefit of involving religious groups in physical activity interventions is that it is a setting in which the whole family can be involved, another key principle in adapting strategies for ethnic minority groups.

Whether or not school-based interventions can promote sustainable improvements in physical activity is not known at this time due to the lack of long term follow up of previous studies. Furthermore, school-based interventions seem to be more effective at increasing physical activity levels during school time than during leisure time. Dobbins et al suggested that school-based physical activity interventions may need to be marketed in a more creative way in order to inspire genuine interest in sports and physical activity among children and adolescents, which in turn should lead to long term behaviour change. London 2012 could well be the additional boost.
needed in marketing physical activity in such a way as to make it more fun and enjoyable. Dobbins et al suggested that a potential adverse effect of school-based interventions is the risk of children feeling that the activity is a part of school work and is therefore not fun. It is possible that one of the greatest impacts of using Olympic events to inspire physical activity may lie in the use of the promotion of sports participation outside of school time, which reduces the risk of physical activity being perceived as becoming ‘school work’.

One potentially unique impact of the Olympics is the chance for children to identify sporting role models from a similar ethnic background. Research has shown that role models are most effective if of the same gender and ethnic origin. For Asian communities in particular there is a lack of sporting role models in the UK, particularly for South Asian women. Through the Olympics, sports such as hockey, badminton and table tennis, which are typically dominated by Asian countries, children have the chance to indentify sporting role models from a similar ethnic background, which may in turn encourage increases in sports participation in these communities.

A systematic review of interventions to increase sports participation through sporting organisations was attempted by Priest et al but, surprisingly, no rigorous studies evaluating such interventions were found. Sporting Equals is an organisation which specialises in promotion of physical activity in ethnic minority and disadvantaged groups. They work closely with National Governing Bodies, Sport England and the Youth Sports Trust, among others, to raise sports participation and physical activity in ethnic minority and deprived communities. Among other things, the organisation helps to identify and break down barriers to sport for underserved groups; advises on effective strategies for marketing of sports and physical activity to ethnic minority communities; raises awareness of local opportunities and young sporting role models from ethnic minorities; encourages changes in attitudes towards sport and physical activity; provides resources to NGBs to facilitate increases in ethnic minority participation in their sport; and offers funding opportunities for community projects through their Sport for Communities project. Promoting links between schools, local sports clubs and organisations such as Sporting Equals in the run up to London 2012 could greatly improve any efforts to capitalise on the potential of the Games to act as an inspiration for behaviour change among ethnic minority groups.

The VERB study has highlighted some key principles for effective delivery of physical activity promotion materials to children from various ethnic minority groups, including the use of black and Asian media networks, such as radio station, TV networks and newspaper. Dissemination of local and national Olympic-related schemes and events via these channels should be encouraged.
There is also some evidence for the effectiveness of internet-based resources, and electronic resources such as podcasts, in health promotion. Such strategies could be used to increase awareness of the Games and the range of Sports within the event; to highlight sporting role models for ethnic minority groups; to educate children on the importance of physical activity using these role models as examples; and generally increase awareness of local resources and opportunities to get involved in sport.

A major limitation of most intervention studies is the method of physical activity measurement. Most studies have used subjective methods of measuring physical activity, such as questionnaires, which are susceptible to recall bias and over reporting, and are unable to accurately record intensity and duration of PA. Objective methods, such as pedometers and accelerometers, offer a more accurate way of measuring physical activity. Hosting the Olympics here in the UK is a once in a lifetime occurrence, but nevertheless, rigorously designed studies evaluating any Olympic-related interventions are required because these results will inform future schemes which could be implemented around the Paralympics and Commonwealth Games, both of which will be hosted in the UK, in 2012 and 2014, respectively. It is clear from the literature that the anticipated physical activity Legacy of the Games has not yet been investigated, and that there is a lack of research into the effectiveness of culturally-adapted interventions.
Considerations for Olympics-related interventions targeting ethnic minority children

1. Increase advertising and awareness of the Games through schools
   - Distribution of information packs to schools, including posters, DVDs/media, materials for displays which can be created by pupils, and monthly newsletters promoting local and national events and schemes linked to London 2012
   - Olympic-themed sports days - The Games will run for 2 weeks from 29th July until 12th August 2012 with the Paralympic Games starting shortly afterwards. The school year finishes on 19th July 2012 and the majority of schools end the year with an ‘enrichment week’ in which children have the opportunity to take part in non-curricular activities run by the subject departments. This would be the perfect time to stage an intervention as it falls perfectly in line with the build up to the Olympics and it would likely be welcomed by schools to reduce departmental workload organising these extra activities
   - Show highlights of past Olympic events at lunchtimes, during breaks
   - Incorporate educational aspects of sport into a range of curricular subjects. For example the health benefits of sport can be taught through science lessons; the history and progression of the Olympics through history lessons; sociological and cultural aspects of sport through citizenship, Religious Education and PSHE; sport and the media through media studies, English and drama. Research shows that promoting activity through changes to the curriculum can yield positive results with regard to duration of physical activity.44

2. Utilise black and Asian media networks, such as radio, TV and newspaper, to disseminate information on local sporting opportunities and London 2012
   The Olympics receives extensive media coverage through mainstream networks; alternative media networks should be encouraged to do the same to ensure that all ethnic groups are reached.

3. Promote links between schools, local sports clubs, NGBs and sporting organisations such as Sporting Equals in the run up to London 2012 in order to increase sport and leisure opportunities for children which remain accessible after London 2012
   One-off opportunities to try a sport are unlikely to have lasting effects on participation, so resources and opportunities must be accessible on a long term basis.
4. Include community members from ethnic minority groups in the design and developmental stages in order to identify and tackle the perceived barriers to activity, assess feasibility and acceptability, and gather information on preferred intervention components to ensure cultural relevance

5. **Identify and promote ethnic minority sporting role models through the Games**

Use of these role models to not only promote their sport to ethnic minority children, but also to educate on the health benefits of physical activity, should be encouraged wherever possible

6. **Increase awareness of leisure opportunities in the local community.**

The authors of a systematic review commissioned by the Department of Health suggested that the Games has the potential to move people between the levels of engagement in sport and physical activity.\(^{32}\) In other words, during the Olympic period, the main effect is likely to be that of encouraging inactive people to consider trying a new sport. If this hypothesis is true, it is essential that schemes are in place to ensure that these people are not then met by traditional barriers to sport such as financial restraints and lack of awareness of local facilities and sports clubs.

- Free/low cost sports ‘taster sessions’ at lunchtimes, after school or at weekends, encompassing a wide range of sports to provide opportunities get involved with something new. Taster sessions could be run by local clubs, university students, volunteers, teachers or school staff. Research has pointed toward lack of motivation as a factor affecting physical activity levels, especially if an event is seen to be a ‘one-off’ occurrence. By promoting sessions run by local sports clubs, and advertising opportunities to join these clubs rather than simply having a one-off session, children and parents may be more motivated to attend as there is a clear opportunity for long term involvement in the sport.\(^{36}\)

- Signposting of local events, sports clubs, leisure centres and youth/community groups in the period of time around London 2012 when children are most likely to be caught up in the spirit of the Games.

- There is evidence to suggest that engaging the target community through activities run by local sports clubs can successfully facilitate improvements in activity levels at a population level.\(^{57}\) However, interventions which aim to engage the community mainly through activities run by local sports clubs or sports organisations may not be as effective in girls as in boys, so it is important that a wide range of clubs and sports are included in order to appeal to as many children as possible.\(^{57}\)
• All resources and promotional material should be offered in alternative languages. Delivery of sports and activity sessions by coaches from ethnic minority groups may also increase chances of increasing participation rates.

7. **Involve religious institutions and religious leaders in the design and delivery of interventions**

8. **Promote sports events which accommodate, and appeal to, the whole family.**
   
   For example, sports days and taster sessions could include parents and children, and local clubs which offer facilities and/or sports teams for adults and children should be indentified and promoted. Some of the key socio-cultural determinants of physical activity identified by previous research are parental level of physical activity and parental support. \(^{58:59}\)

The London 2012 organising committee are already running national and local schemes for schools across the UK, such as the ‘Get Set’ schools network, the London 2012 Ticketshare scheme, and a newly launched initiative called ‘The Games and Me’. Schools can benefit greatly by joining these schemes. For example, The London 2012 Ticketshare programme promises to donate Olympic tickets to children and young people in schools and colleges across the UK. Schools and colleges which are members of the Get Set network and participating in the School Games will be able to secure an allocation of London 2012 Ticketshare tickets next year. Schools should actively be encouraged to get involved in the ‘School Games’ which is due to be rolled out to schools nationally from September 2011. This National Lottery funded intra-school competition run by the Youth Sports Trust will operate at a local and regional level competition, culminating in a National multi-sport residential event.
Conclusion

The anticipated physical activity Legacy of London 2012 is unlikely to occur automatically, and additional supporting strategies to fully engage all ethnic groups are likely to be required. However, with the high profile status of the Games as a marketing strategy for sports and physical activity, along with the range of sports which can be promoted, and the opportunity for children to identify sporting role models from ethnic minority backgrounds through the Games (which are currently lacking for many ethnic groups), London 2012 has the potential to act as a catalyst in promoting physical activity.

However, it appears that there are several key principles in engaging ethnic minority groups in physical which should be taken into consideration: identify the cultural-specific perceptions regarding barriers to activity; take into account the perceptions of community members in the design and development of intervention components; increase awareness of, and access to, sports facilities and clubs in the local area, especially those which incur little or no cost and ensure that such facilities remain accessible on a long-term basis; utilise ethnic minority role models to disseminate healthy lifestyle messages, and where possible, these should be local role models who are able to develop a relationship with the schools and local community; encourage parents and family to be involved; incorporate school, community and religious settings in the delivery; provide facilities and resources in languages specific to the ethnic make-up of the school and community populations.

Looking beyond London 2012, future research evaluating interventions to increase physical activity through major sports events need to be more rigorously designed, use validated subjective methods of measuring physical activity wherever possible, and report findings by gender and ethnic group in an attempt to reveal the most effective strategies among these subgroups. Although London 2012 is a one-off event, evaluation of Olympic-related interventions should be strongly encouraged so that successful interventions can be implemented around future events irrespective of host country.
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