

MoveMore: Reducing Physical Inactivity in Deprived Communities

Background

Physical inactivity is a major public health concern globally and within the UK. According to the WHO, insufficient physical activity contributes to higher risks of non-communicable diseases such as diabetes, cardiovascular disorders, and anxiety, while also affecting healthy development in children. Alarmingly, 31% of adults and 80% of adolescents fail to meet recommended activity levels, increasing mortality risk by 20–30%. In the UK, inactivity contributes to one in six deaths and costs £7.4 billion annually. Deprived communities experience disproportionately higher inactivity rates, with 35% inactive compared to 15% in affluent areas. Therefore, targeted interventions promoting equitable access to physical activity are essential.

Health Promotion Values and Principles

NHS health promotion is founded on values of equity, respect, dignity, and high-quality care for all. Services are designed to be accessible irrespective of gender, race, disability, or socioeconomic status, and are provided free based on clinical need. Innovation, collaboration, and patient-centred practice guide intervention design. The MoveMore Tiles align strongly with these values by offering an inclusive, low-cost, and community-based solution targeted at underserved groups. Installed in easily accessible public spaces, the tool promotes equal opportunity, reduces digital and socioeconomic barriers, and respects individual abilities through adaptable features. Its collaborative, community-focused model supports NHS aims of reducing health inequalities.

Behavioural Change Theory

Self-determination theory explains how satisfying psychological needs for autonomy, competence, and relatedness enhances motivation for behavioural change. MoveMore Tiles support autonomy by allowing users to select activity type, intensity, game mode, and frequency. Competence is strengthened through visual progress tracking, personalised goals, and interactive feedback that build skill confidence. The community-based setup promotes relatedness by encouraging teamwork, peer support, and social engagement. These elements collectively foster intrinsic motivation, particularly beneficial for individuals facing barriers to traditional exercise. For low-income communities, this approach reduces social isolation, increases participation, and strengthens commitment to daily physical activity, supporting long-term behavioural change.

Expected Outcome

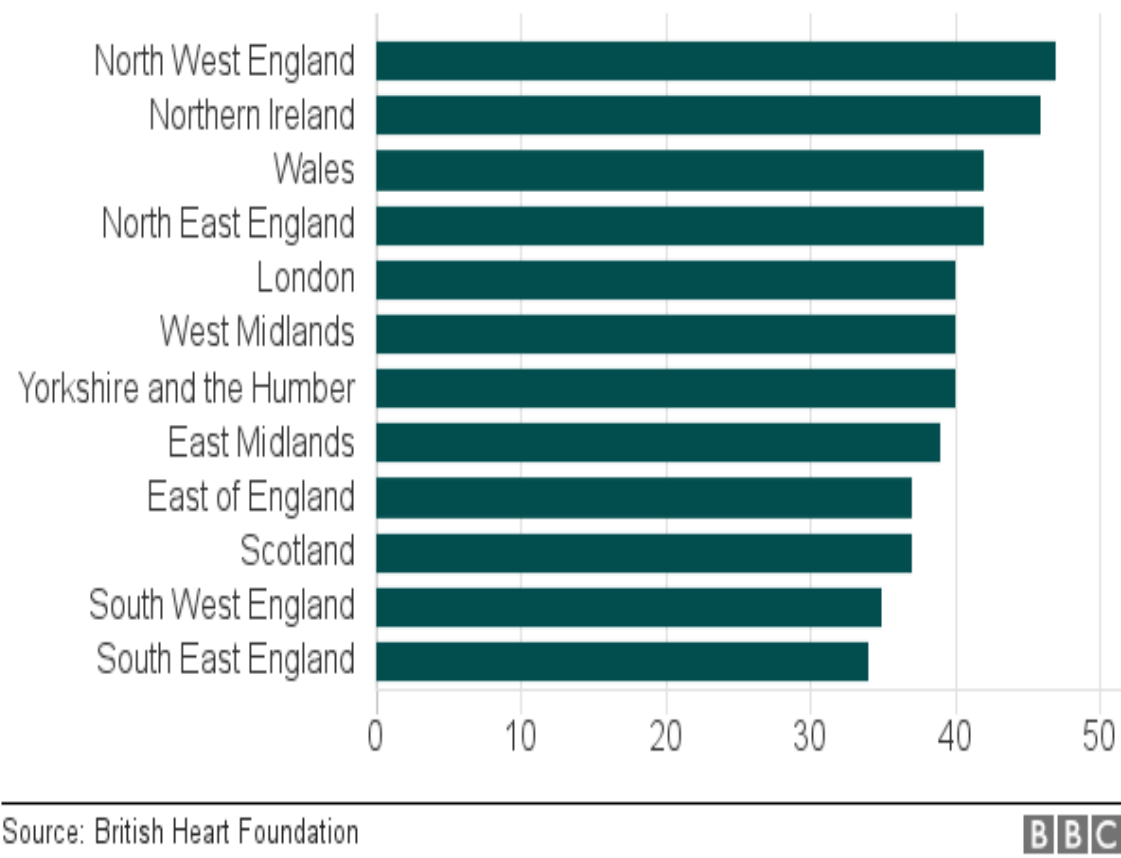
Integrating self-determination theory into MoveMore Tiles is expected to increase physical activity among low-income communities by enhancing autonomy, competence, and relatedness. Allowing personalised control over game type and intensity fosters intrinsic motivation, while visual feedback strengthens confidence and performance. Social interaction within community spaces further encourages engagement. Together, these elements should reduce inactivity levels and support improved physical and mental health outcomes. However, individuals dependent on external rewards, those with mobility limitations, or users affected by technical issues may experience reduced engagement. Despite these limitations, the intervention has strong potential to promote sustained participation, equitable access, and healthier community behaviour.



Conclusion

MoveMore Smart Floor Tiles can significantly influence policy, education, and research by generating real-world insights into community-based digital health interventions. User data can inform NHS strategies aimed at reducing activity-related health inequalities in deprived areas and shaping inclusive physical-activity policies. Educationally, the tool provides opportunities for students and practitioners to understand practical applications of digital public health solutions. For research, user feedback supports evaluating the effectiveness, accessibility, and limitations of emerging technologies in improving population health. These insights can guide future innovations and ensure continuous improvement in designing equitable, evidence-based digital interventions for diverse communities.

Physical inactivity levels across the United Kingdom (Percentage of region's population that is considered inactive)



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