

ActiLink, An Equity Focused Digital Intervention to Reduce Physical Inactivity

Background

Scale of the problem

- Lack of physical exercise is a major predisposing factor to non communicable diseases and ill health.
- It is a cause of higher healthcare expenses and poor quality of life (Roberts et al., 2017).
- Women, older people and disadvantaged groups are at risk (Lupton, 2014).
- There is a relationship between digital health engagement and better activity and less sedentary behaviour (McLaughlin et al., 2021).

Why intervention is needed

- The level of inactivity in the world is on the increase regardless of the awareness campaigns.
- The current strategies are not always effective to maintain long term behaviour change (Cho et al., 2021).
- Between them, there exist barriers such as accessibility, affordability and digital literacy (Roberts et al., 2017).
- The effectiveness of intervention among different populations is not consistent, which points to gaps in the intervention (Lee et al., 2019).

Previous interventions

- Fitness trackers are wearable and help with self monitoring and goal setting (Cho et al., 2021).
- Awareness is created through population level in terms of public health campaigns (Lintonen et al., 2008).
- Community programmes offer social support of activity.
- Long term compliance is not consistent (Laverack, 2004).

Introduction of new intervention

- ActiLink is a physical activity mHealth platform that relies on AI.
- Integrates the mobile technology with optional low cost wearables (Rouleau et al., 2024).
- Has multilingual support, offline support and community support (Laverack, 2004).
- Strives to enhance motivation and lasting behaviour change (Lintonen et al., 2008).

Principles of health promotion and Values

Key principles

Equity, empowerment, participation, accessibility and prevention are some of the principles governing health promotion in order to enhance the health of the population and improve inequalities (Cho et al., 2021).

Equity aims at promoting equitable access to health resources and having attention to social factors that determine the health outcomes (Laverack, 2007).

Empowerment helps individuals and community to have better control over their health choices and behaviours and enhance self efficacy and autonomy (Lintonen et al., 2008).

Participation will promote the active participation in health activities, enhancing the interest and maintenance of interventions (Lupton, 2014).

Prevention based approach emphasises on the minimisation of risk factors at early stages to limit the effects of chronic disease.

Application to ActiLink

ActiLink provides equity in the form of its low cost wearable option and free app design which only decreases the financial obstacles to participation (Roberts et al., 2017).



The multilingual capabilities, a user-friendly interface and an offline mode improve accessibility by making it reach a broader population (Nuss et al., 2021).



The community forums and peer interaction facilities support engagement and social support, which is relevant to long-term behaviour change (Cho et al., 2021).



Empowerment is enhanced when personalised coaching and customised feedback are used to help users to set goals and track progress (Roberts et al., 2017).



• One such approach is that the platform is preventative in nature as it promotes regular exercise to lower long term health risks and increase wellbeing.



Behaviour change theory

Self Determination Theory: This theory describes behaviour change in terms of a person having three fundamental psychological needs, autonomy, competence and relatedness, which aid intrinsic motivation (Fortier et al., 2012).

Programs that are informed by this theory lead to better compliance with physical exercise due to an increase in self control, confidence and long-lasting motivation (Nuss et al., 2021).

Evidence demonstrates that psychological needs would be satisfied and result in long term involvement in health behaviours (Silva et al., 2010).

Digital interventions grounded on theories are more efficient since they are action-oriented towards motivational and behavioural processes (Morrison, 2015).

Application to ActiLink

Adaptive feedback and personalised goals improves competence and facilitates self monitoring.

Individualized advice encourages autonomy, where the user is free to make informed decisions on activity.

Interrelation and social support Community forums and peer interaction features enhance relatedness.

Prompts guided by behaviour change models that are stage based assist in personalizing support based on readiness to change (Cho et al., 2018).

Aspects of the COM-B model are used to supplement the intervention as they consider the capability, opportunity and motivation of maintaining behaviour change.

Final Statement

The digital innovation can offer an opportunity to tackle physical inactivity via inclusive, scalable and theory grounded health promotion interventions.

References

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Expected outcomes

- The intervention should raise the level of physical activity by offering individual assistance and constant observation with the use of digital tools.
- It has been shown that mHealth interventions have the potential to enhance physical fitness and activity engagement among various groups of people (Wang et al., 2024).
- The elements of motivation and adherence can be enhanced with the help of an individualised feedback and goal setting and social support functions within the platform.
- Long term digital interventions also have the potential of supporting behaviour change, but the outcomes are inconsistent (Mönningshoff et al., 2021).
- The platform can help decrease the issue of inequality in health by enhancing access to cheap and easily available digital information.
- Nevertheless, the engagement drop off is also a possible weakness especially when no assistance is provided.
- It needs to be assessed and evaluated continuously to determine whether it is effective and scalable in practice.

Findings and recommendations.

Policy

- Digital interventions such as ActiLink should be integrated into national strategies of digital health in order to help preventively at the population level.
- Policy support: Infrastructure should be enhanced by facilitating funding and cross sectoral working to create equal access.
- Data protection, ethical use and scalability of digital health solutions should be regulated.

Education

- Digital health literacy programmes: Digital health tools require improved confidence and skills, which are needed through digital health literacy programmes.
- Education interventions can assist persons to interact successfully with the digital interventions and maintain behaviour change.
- Healthcare professional training on how to implement and engage users is required.

Research

- Pilot studies are needed to assess feasibility, real world performance in a variety of populations.
- The long term evaluations are required to evaluate the sustainability, cost effect and health outcomes.
- The next step should be examining ways of enhancing engagement and decreasing digital exclusion.