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**Technology and inactivity
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Technology and inactivity; Overcoming sedentary behaviour in the home through design interventions

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Abstract

Technological advancement has continuously impacted on the level of physical activity in our world today. Physical activity is directly linked with health outcomes; hence, this exponential growth has prompted increased sedentary activities and encouraged inactivity. The 60 minutes moderate to vigorous recommendation of physical activity are not however met by young people. This is because of excessive time spent on screen based activities each day. Thus, this lowered level of young people's engagement in physical activity can be attributed to modern technology (such as Video games, TV, computers) and the ease it has provided in achieving daily task. Hence, research is now required on wider determinants of sedentary behaviour and effective intervention must be identified. Exergames have successfully encouraged physical activity through fun, social interaction, engaging gameplay and goal setting, thus, and serving as a suitable alternative to sedentary pursuits within the home. The purpose of this article is to summarise the available evidence on the effectiveness of existing design-led interventions targeted at changing lifestyle behaviours such as sedentary behaviour. Studies were identified through systematic database search as well as existing literature reviews. We categorise the intervention based on screen-based technologies, mobile technologies, smart phone apps, simple physical products and their potential to foster long-term commitment in reducing sedentary leisure time activities.

We create a framework on identifying the influences on the targeted behaviour by drawing from the definitions of sedentary behaviour, perceived barriers and the effectiveness of design intervention. This review covers behavioural interventions from various discipline, psychological/ behavioural processes and how the application of design intervention in changing behaviour and addressing various societal challenges we face is increasing. The review outlined how design interventions have gradually supported user progression through tailored feedback messages in modifying the behavioural determinants of sedentary behaviour.

Full Paper awaiting publication