

Correspondence

Gamification for nurturing healthy habits

Achieving the highest attainable standard of health is a fundamental right of every human being. The present global health scenario is facing a 'triple burden of diseases' including the unfinished agenda of communicable diseases, newly emerging and re-emerging diseases along with an unprecedented rise of non-communicable chronic diseases. The factors that aid progress and development, such as globalization of trade, urbanization and ease of global travel, act as a double-edged sword. While they lead to positive health outcomes, they also increase the vulnerability to poor health contributing to sedentary lifestyles and unhealthy dietary habits.¹ Healthy habits comprise health, nutrition and safety practices, which if performed regularly, over a period of time, contribute to improved overall physical, social and mental health. Well-being is a positive outcome that reflects good living conditions. It integrates physical as well as mental health resulting in more holistic approaches to health promotion and disease prevention.

Health and well-being can be improved through modification of individual behaviours.² Intrinsically motivated behaviour change is more desirable as it is both sustainable and contributes directly to well-being. Health literacy implies the attainment of a required level of knowledge, personal skills and confidence to act to improve personal and community health by changing personal lifestyle and living conditions.³

Globalization and information and communications technologies (ICTs) continue to change the world we live in.⁴ ICT can act as a medium of intervention in distributing health information and behaviour change, as a research instrument in data collection and reaching research subjects, and for professional development.⁵ Serious games constitute an important area for health as they can contribute in changing health behaviour. The main rationale for using games for serious purposes such as health is their ability to motivate people.⁶

A gamification approach in health-related mobile applications can change people's health-related behaviour and influence forming of new healthy habits.⁷ Gamification refers to the 'use of game design elements within non-game contexts'.⁸ Gamification encourages behaviour change in health, and it can be a tool for increasing the awareness on serious issues and helping societies overcome epidemics. Gamification also has the potential to help people with chronic diseases by assisting them in the management of their medical regimens.⁹ Studies have shown promising links between gamification principles and health behaviour change. Different levels of user engagement depend on the presence of the elements of gamification.¹⁰

Gamification relies on 4 semantic components: (i) *game*; (ii) *elements*; (iii) *design*; and (iv) *non-game contexts*. It also involves 7 core elements: (i) goal setting; (ii) capacity to overcome challenges; (iii) providing feedback on performance; (iv) reinforcement; (v) comparing progress; (vi) social connectivity; and (vii) fun and playfulness. These elements have shown clear linkages to proven behaviour change strategies, with the exception of fun and playfulness, which has perhaps not received much attention in the literature on changing health behaviour.¹¹ For enhancing the effectiveness of gamification, gamified technology must outperform other design patterns, in its ability to influence people's beliefs, attitudes or behaviours.¹² Moreover, the impact of gamification must have long-term sustainability and offer more than a short-term novelty effect.

Hence, compared to existing approaches such as serious games for health or persuasive technology, gamification has been posited as a promising new alternative that embodies a 'new model for health':

'seductive, ubiquitous, lifelong health interfaces' for well-being and self-care.¹⁰⁻²¹ More specifically, 7 potential advantages of gamification for health and well-being are: (i) supporting intrinsic motivation (as games have been shown to motivate intrinsically); (ii) broad accessibility through mobile technology and ubiquitous sensors; (iii) broad appeal across audiences (as gaming has become mainstream); (iv) broad applicability across health and well-being risks and factors; (v) cost-benefit efficiency of enhancing existing systems (versus building bespoke games); (vi) everyday life fit (reorganizing existing activity rather than adding additional demands to people's lives); and (vii) direct well-being support (by providing positive experiences).

Therefore, gamification should be encouraged to tackle the triple burden of diseases, through raising awareness and changing individual and community behaviour and ushering in a healthy India.

Conflicts of interest. None declared

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