

Adolescents' Perspectives on Gamified Mobile Applications to Promote Physical Activity: Qualitative Research in Slovenia

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Purpose: This study explores Slovenian adolescents' attitudes, motivations, and preferences regarding physical activity (PA), with an emphasis on their expectations for gamified mobile applications designed to increase PA. The objective was to identify motivators, barriers, and key features for designing and promoting effective digital health interventions for adolescents.

Methods: A qualitative design was employed, entailing six focus groups (FG) with 33 adolescents (ages 15–21) from secondary schools in the Ljubljana Region. FGs followed a semi-structured protocol to investigate participants' attitudes towards PA, obstacles they face, motivators that influence their behaviour, and preferred application features. Thematic analysis was employed for its capacity to identify patterns through deductive and inductive coding, enabling a comprehensive exploration of motivators, barriers, and attitudes. Analyses were conducted using NVivo 12. Ethical approval was obtained from the National Ethics Committee of Slovenia (ref: 0120-246/2024-2711-6).

Results: Analysis identified three overarching themes: (1) Motivational drivers and barriers: Intrinsic motivators included enjoyment, wellbeing, and self-improvement, while extrinsic motivators included rewards, competition, and peer influence. Key barriers were academic demands, time constraints, inclement weather, and inadequate social support. (2) Desired application features: Adolescents showed clear preferences for personalised profiles, digital socialisation (friend-based challenges, achievement sharing), engaging and flexible challenges, and meaningful rewards (virtual badges, discounts, event tickets), as well as intuitive design and free access. (3) Promotion and adoption: Peer recommendations and influencer endorsements on social media platforms such as Instagram and TikTok were considered most effective for promoting adoption, while recommendations from teachers or parents were less influential.

Conclusion: The capacity of gamified mobile applications to encourage physical activity among adolescents depends on the incorporation of user-centred features, strong social components, and adaptable challenges. Effective interventions should address real barriers, align with youth culture, and utilise peer-driven promotional strategies. These findings inform policy and practice by underscoring the necessity for participatory, youth-centred digital health promotion and the imperative to integrate digital literacy, privacy, and responsible gamification into public health strategies.

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