## Adolescent engagement in health-related massive open online courses (MOOCs): a rapid review

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## Background:

A wide range of health interventions using digital tools have been developed to promote health and well-being among adolescents, including the utilisation of massive open online courses (MOOCs). However, the evidence about health-related MOOCs for adolescents is scarce. This rapid review aimed to synthesise evidence on content, engagement strategies and evaluation methods in health-related MOOCs for adolescents.

# Methods:

Following the Cochrane rapid review methodology, four databases were used to search for potential studies published between 1<sup>st</sup> January 2014 and 13<sup>th</sup> March 2024. Full dual screening was performed. Peer-reviewed empirical studies in English that utilised MOOCs to deliver health-related information to adolescents were included in this review. Study characteristics, type of content, levels of engagement, learning activities, factors influencing learning engagement, and evaluation methods were extracted. The Mixed-Methods Appraisal Tool was used to appraise study scope and quality.

### **Results:**

Six studies were included in this rapid review, with half of them focusing on digital health literacy. Two studies targeted specific adolescent populations: adolescents with type 1 diabetes, and American Indian/Alaskan Native. Adolescent engagement in the development of health-related MOOCs varied, with three studies involving active engagement as co-creators. Most studies provided clear learning activities and modules in their MOOCs. Factors influencing learning engagement in health-related MOOCs can be classified into internal (e.g., personal experience and level of satisfaction) and external (e.g., relevance and credibility of the content). Emotional and cognitive domains were the most analysed outcomes for measuring learning engagement in health-related MOOCs.

### **Conclusions:**

This rapid review suggests that the development of MOOCs has provided opportunities for adolescents to engage in health promotion programs and to ensure that the information provided was relevant and tailored for them. The findings from this study encourage the active engagement of adolescents as health consumers using collaborative digital tools in health promotion strategies.

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