

Abstract

Co-Design of Educational and Digital Interventions in Oncohematology: A Scoping Review

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Introduction. Patients with hematological malignancies and their caregivers face substantial informational, psychological, and organizational needs throughout the disease trajectory. Participatory design approaches based on iterative processes and active user involvement have emerged as promising strategies for developing educational and digital interventions aligned with the needs and preferences of target populations. However, their application in oncohematology remains poorly explored. The aim of this scoping review was to map co-designed interventions involving patients and caregivers, describe user involvement strategies, and synthesize reported barriers, facilitators, and clinical effectiveness outcomes.

Methods. A scoping review was conducted according to JBI methodology and the Arksey and O'Malley framework. Primary studies of any design published in English or Italian were eligible if they involved patients with hematological malignancies and/or caregivers, described the iterative development of interventions, and included active user involvement across multiple stages. Studies limiting user involvement to the final stages, as well as secondary studies, abstracts, editorials, and conference papers, were excluded. PubMed, MEDLINE, Scopus, and CINAHL were searched from inception to October 30, 2025.

Results. Six studies met the inclusion criteria. Considerable heterogeneity was observed in the digital tools developed, theoretical frameworks adopted, and strategies used to involve patients and caregivers. The included studies also identified several barriers and facilitators influencing the co-design process.

Discussion. Co-design appears to be a feasible and promising approach in oncohematology, although its implementation remains limited. Identified barriers highlight the need for flexible and adaptive design processes. Current evidence primarily focuses on process and usability outcomes, while evidence regarding clinical effectiveness remains limited. Future research should standardize reporting of user involvement and systematically evaluate the effects of co-designed interventions on

clinical and experiential outcomes.

Keywords: Co-Design, Digital Health, Hematologic Neoplasms

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