

Intervention studies need to adapt to better address patient needs for diabetes self-management



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Introduction

Research on health technologies traditionally report clinical measures. However, with mHealth and online resources for diabetes self-management, individuals are calling for more, diverse evidence. We compare two reviews to determine to what extent mHealth and online intervention studies address patient-reported needs.

Methods

A systematic review (Review 1) searched for reported outcomes of mHealth and online intervention studies (PROSPERO registration: CRD42018115246). A literature review (Review 2) searched for patient-reported needs for diabetes self-management. Both covered articles published between 2015 and 2019. The co-authors categorized the results of reported outcomes (n=6) and patient needs (n=4), as well as sub-categories within each, based on inductive analysis.

Results

Reviews 1 and 2 resulted in n=31 and n=21 articles, respectively. Main categories of reported outcomes were: support from/access to resources, usability/suitability, patient empowerment/engagement, clinical outcomes, and data protection. Main needs categories were: support/access to resources, information, coping

and patient engagement/empowerment, and technology. While some categories appear the same, the sub-categories of outcomes and needs therein were different. For example, under the category support/access to services, reported intervention outcomes included peers, coordinated-care services and relevant information. However, specific patient-reported needs included resources and services to self-management activities, e.g. gyms, feedback on self-management performance and reminders. See Figure 1 for more details.

Conclusion

While we identified differences between categories, these differences were not always contradictory. In fact, the sub-categories of patient needs could be seen as examples of the sub-categories of reported outcomes. For example, the reported outcome of “relevant diabetes information” can be described as including the patients’ need for “feedback on SM performances” or “resources and services that facilitate SM activities”. By involving patients in the design of mHealth studies, research has the potential to become more specific in what it measures and aims to report. This will improve the replicability of those studies, but will also make patients and researchers more aware of the relevance of mHealth studies in addressing patients’ needs. In doing so, we can provide evidence of the relationship that these resources have on the success of the intervention.

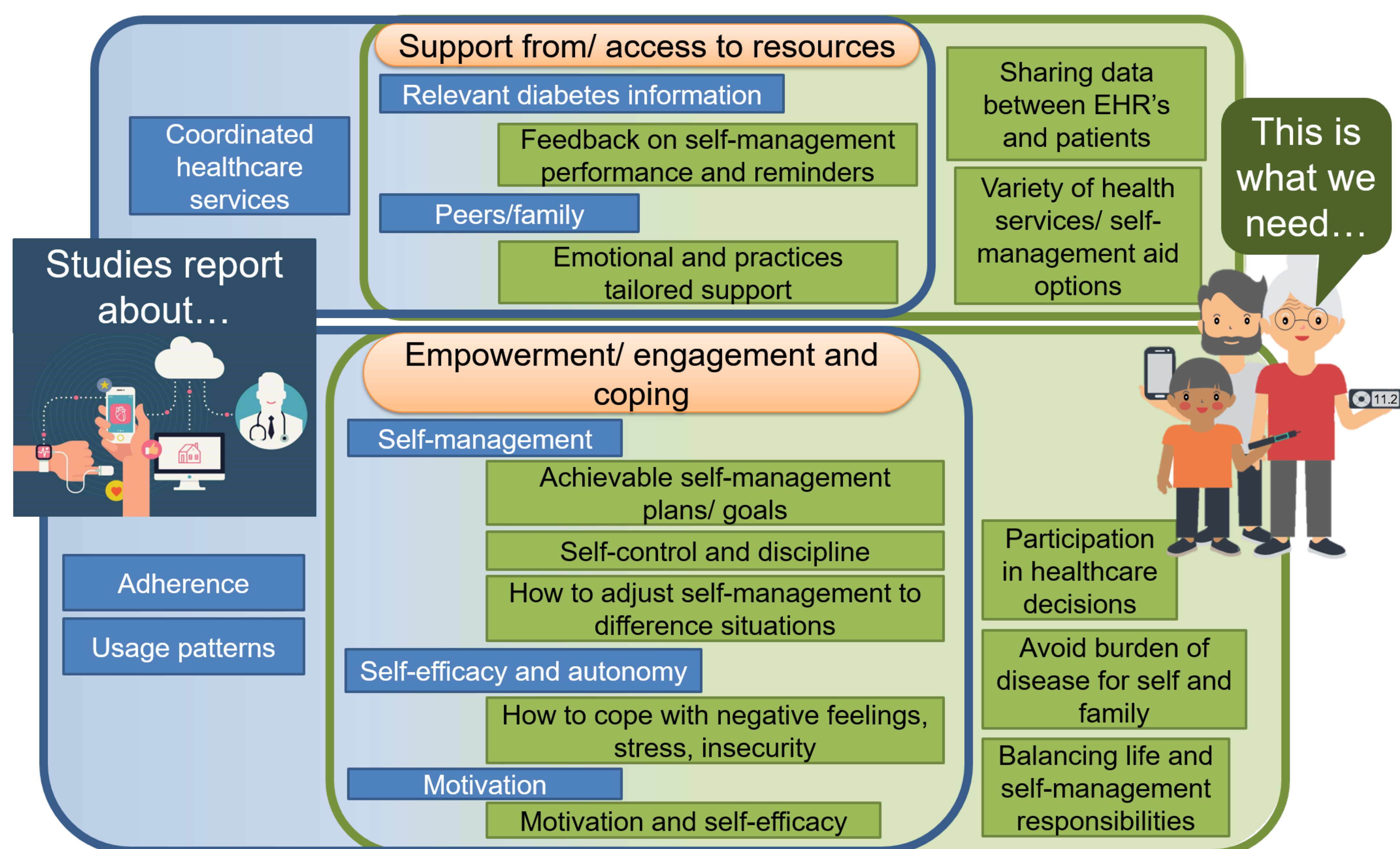


Figure 1. Venn diagram illustrating common and unique sub-categories within two main categories of reported outcomes and patient needs.