INTRODUCTION

With this scoping review we aim to gain a better understanding of why some mobile physical activity (PA) interventions are more effective than others in increasing PA. To this end, we explored the different technical implementations and design characteristics of common and likely effective persuasive strategies (goal setting, monitoring, reminders, rewards, sharing and social comparison). Furthermore, we examine to what extent it might influence the effectiveness of the strategy to persuade the user to engage in PA.

RESULTS

29 original interventions were identified (86 intervention arms). A great heterogeneity regarding the design characteristics and technical implementation was found in all persuasive strategies. Moreover, we demonstrated that some implementations are more effective than others. Thus, how an persuasive strategy is designed and implemented influences the effectiveness of the intervention. Detailed results of the strategies ‘rewards’ and ‘goal setting’ are displayed below.

METHOD

Search strategy: Snowball and grey literature searches were performed. Studies were included if they met the selection criteria.

Data extraction: The data chart was developed with multiple iterations. The final chart consisted of:

1. Study characteristics (e.g. study duration, target group)
2. Technical implementation (delivery systems and elements, workflow) and design characteristics of the persuasive strategy (e.g. content, complexity) (inspired by [1])
3. Study results (positive, neutral and negative)

GOAL SETTING

Studies comparing implementations and designs

1. Only 3 studies compared designs (none examined implementations)
2. Cumulative rewards are promising;
3. No difference for rewarding team vs. individual and loss aversion vs. lottery.

CONCLUSION

The implementation and design of persuasive strategies can influence the effectiveness of the intervention. Future studies should therefore critically consider the different implementations and designs of the strategies when developing interventions and before drawing conclusions on the effectiveness of the strategy as a whole. Future efforts should be made to examine which implementations and designs are most effective.