

Promoting parental support of 24-hour movement behaviors among children and adolescents with intellectual disability via an mHealth-based intervention: A pilot study

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Background: Parental support (PS) is a key determinant of children's 24-hour movement behaviors (24HMB) in families of children and adolescents with intellectual disability (CAID), yet maintaining consistent support is challenging. Many parents intend to support their children in these behaviors, but often fail to translate into action. Guided by the Multi-Process Action Control (M-PAC) framework, mHealth-based interventions may offer a scalable approach to strengthen behavior-change processes.

Objectives: To examine the feasibility, acceptability, and preliminary efficacy of an mHealth-based intervention on PS of 24HMB.

Methods: Fifty-eight parents of CAID (69% mothers) participated in this 8-week quasi-experimental study and were allocated to an intervention group (n=33) or a control group (n=25). Feasibility outcomes included recruitment and retention rates and satisfaction, ease of use and usefulness scores. Preliminary efficacy outcomes were self-report PS of 24HMB and M-PAC constructs. Data were analyzed using intention-to-treat linear mixed models.

Results: Recruitment and retention rates were 85.3% and 84.5%, respectively. Most parents reported high scores for satisfaction (96.9%), ease to use (87.5%), and usefulness (93.8%) of the mHealth-based intervention. Intervention parents trended towards improved PS behaviors and M-PAC constructs.

Conclusion : The mHealth-based program was feasible, acceptable, and showed

preliminary efficacy for improving PS of 24HMB in parents of CAID. Targeting M-PAC mechanisms—particularly identity—appears promising for future refinement. Larger-scale randomized controlled trials are needed in the future to test the intervention effectiveness.

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