

Exercise: love it, hate it, or somewhere in-between? Identifying exercise self-efficacy and the impact of personal training in children and young people with CF

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Objectives: Supervised exercise is beneficial for children and young people (CYP) with CF, however it is resource intensive and participation varies. Resource-limited CF centres must decide how to direct resources, including supervised exercise, so maximum benefit is achieved. Thematic analysis was used to explore: exercise self-efficacy, attitudes, experiences, and self-reported effectiveness of personal training (PTr) in CYP with CF 12-35 months after a supervised exercise RCT (INSPIRE-CF).

Methods: 20 CYP (aged 11-16 years; 6 male) were interviewed. Themes were independently identified by 2 coders and confirmed via discussion. Self-efficacy was estimated using Children's Self-Perceptions of Adequacy in and Predilection for Physical Activity (CSAPPA).

Results: 18 CYP exercised with PTr. Self-efficacy ranged from 34-72/76 (mean 53.0), higher values indicate greater self-efficacy. All participants identified enjoyable exercise activities despite variation in measures of adequacy (11-28/28, mean 19.7), predilection (10-35/36, mean 24.7) and enjoyment (3-12/12, mean 8.6). All CYP exercising with PTr reported themes of: 'fun', 'variety' and 'gained skills/knowledge'. Five CYP reported that regular PTr had made them 'sporty'. Those who identified as 'sporty' before exercising with PTr (n=4) had higher self-efficacy scores (>63/76) than those who identified as 'not sporty' (n=8) (<52/76). Participants unable to identify barriers to exercise paradoxically tended to score mean or less in all CSAPPA domains.

Conclusions: PTr guided exercise is an effective intervention and highly valued by CYP with CF, significantly impacting the exercise behaviour and sense of identity in 5/18 (27%). Identifying barriers may only be feasible in CYP with knowledge & experience of regular exercise. Sense of identity and self-reported predilection & adequacy may provide insights and help with development of a toolkit to assist CF centres to provide individualised exercise plans for CYP with CF.