Implementation of the BOOST programme in routine NHS practice

Background

BOOST is a 12-week, group-based education and exercise programme informed by cognitive-behavioural approach for older people with lumbar spinal stenosis. When compared to best practice advice in a large randomised controlled trial (RCT), the BOOST programme significantly improved walking at six and 12 months, reduced the risk of falling, and was cost-effective. This implementation work aimed to optimise the BOOST programme, develop and assess the BOOST online course, evaluate clinical outcomes in patients, and understand the experiences BOOST programme providers (physiotherapists and exercise instructors) in delivering the programme.

Methods

Stage 1: The programme was optimised using RCT data, and input from a community of practice (n=30). The optimised programme was evaluated in 31 patients across four NHS sites (Cohort 1) and delivered by physiotherapists and exercise instructors who attended BOOST face-to-face training.

Stage 2: The face-to-face training was adapted to an online format on FutureLearn platform, followed by an impact evaluation. The programme was then evaluated in 74 patients across nine NHS sites (Cohort 2), delivered by physiotherapists who had completed the online course. Additionally, online interviews were conducted with physiotherapists and exercise instructors who delivered the programme.

Results

The BOOST programme was optimised by adding two new exercises, more education about medication, earlier planning for post group exercise and provision of exercise recommendations for each patient to show exercise instructors when joining community-based exercise classes.

28 physiotherapists and 3 level 4 exercise instructors enrolled in the online course, with 24 (77%) completing it. All reported being satisfied, confident, and capable of delivering the programme, with 87.5% intending to use it in clinical practice. At six-month follow-up, 19 participants (61%) provided feedback. Of these, 55% reported delivering the programme and 22% reported using specific elements.

At six months, patients showed greater improvements (2.8 times) in walking ability, compared to the RCT. Changes in ODI items of standing, walking, and pain intensity, and quality of life outcomes were slightly bigger in magnitude than those observed in the BOOST RCT but did not reach statistical significance. Satisfaction with symptom changes was similar to the RCT with 17/31 patients (55%) in Cohort 1 and 34/74 patients (46%) in Cohort 2 reporting satisfaction, compared to 51% in the RCT. Adverse events were minimal (n=3, e.g. increased back pain), similar to the RCT. Exercise engagement post-programme was lower with 17/31 patients (55%) in Cohort 1, and 30/74 patients (41%) in Cohort 2 reported exercising at least two days a week, compared to 73.9% in the RCT.

Facilitators of implementation included managerial support, patient feedback, BOOST materials, and the online course. Printing costs, staff shortages, and lack of exercise space were a few common barriers. While some sites have planned to continue delivering the programme as is, others reported requiring adaptations to suit their services.

Conclusions

The optimised BOOST programme resulted in substantial improvements in walking and disability compared to the original programme and it was implementable in the NHS. The online course is now available worldwide for health professionals treating older people with lumbar spinal stenosis https://learn.exeter.ac.uk/course/view.php?id=83.