



## Investigating optimal education regarding the low FODMAP diet in functional bowel disorders: a feasibility randomised controlled trial of leaflet vs mobile application vs dietetic consultation

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A diet low in fermentable carbohydrates (FODMAPs) improves symptoms of irritable bowel syndrome (IBS) <sup>(1)</sup>. Although it is recommended patients receive advice on a low FODMAP diet by a dietitian <sup>(2)</sup>, this is labour-intensive and costly, highlighting the need for alternative effective education delivery methods. This study aimed to establish the feasibility of undertaking a trial that assesses the clinical and cost effectiveness of different education delivery methods (leaflet vs mobile application vs one-to-one consultation with a dietitian) of the low FODMAP diet.

Patients diagnosed with IBS, functional bloating or functional diarrhoea based upon the Rome IV criteria were recruited in this parallel group, 4-week, feasibility randomised controlled trial. Patients were randomised 1:1:1 to receive information about the low FODMAP diet using leaflets (leaflet), mobile application (app), or one-to-one consultation with a dietitian (dietitian). Feasibility outcomes included recruitment and retention rates, and acceptability of the interventions. Symptoms were assessed using the validated “adequate symptom relief” question and IBS-Symptom Scoring System (IBS-SSS). Analysis of variance was used to analyse continuous outcomes, and chi-squared test for categorical outcomes.

Fifty-one patients were randomised. Overall, recruitment rate was 2.4 patients/month and retention rates were 18/19 (95%) in the leaflet, 16/17 (94%) in the app and 14/15 (93%) in the dietitian group. A higher proportion of patients in the dietitian group (64%) strongly agreed they were “able to implement the low FODMAP diet” compared with the app (13%) and leaflet groups (6%;  $p = 0.008$ ). More patients reported “adequate symptom relief” in the dietitian group (80%) compared to those in the leaflet group at follow up (39%,  $p = 0.026$ ), but not compared to the app (63%). Although there was no significant difference in total IBS-SSS scores among the groups ( $p = 0.438$ ), change in IBS-SSS from baseline was significantly greater in the dietitian group ( $-153 \pm 90$ ) compared to the leaflet group ( $-90 \pm 56$ ;  $p = 0.048$ ), but not compared to the app ( $-120 \pm 62$ ). More patients in the leaflet group (83%) reported they would have preferred to have received a different education method compared with those in the app (44%) and dietitian groups (14%;  $p < 0.001$ ).

To conclude, this feasibility study confirms that an adequately powered trial of the most clinically and cost-effective education delivery method for the low FODMAP diet is required. Preliminary evidence suggests that delivering low FODMAP diet advice through a one-to-one consultation with a dietitian improves functional bowel symptoms compared to leaflets, but not compared to the app.

1. Staudacher and Whelan. (2017) *Gut* 66(8), 1517–27.
2. O’Keeffe and Lomer. (2017) *J Gastroenterol Hepatol* 32(1), 23–6.