Group education by dietitians in patients with gastrointestinal disorders: potentially clinically effective and time for randomised trials

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Abbreviations:

FODMAPs, Fermentable oligosaccharides, disaccharides, monosaccharides and polyols

IBS, Irritable bowel syndrome

IBS-SSS, IBS-Symptom Severity Score
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Irritable bowel syndrome (IBS) is a chronic functional bowel disorder characterised by abdominal pain and altered bowel habit \(^1\) that if not adequately managed can inflict considerable impairment in quality of life \(^2\). Gastrointestinal symptoms are commonly related to ingestion of meals or indeed specific foods \(^3\) and over recent years numerous dietary approaches have been investigated that have placed the dietitian as a central component of the team managing IBS \(^4\).

Dietary restriction of fermentable oligosaccharides, disaccharides, monosaccharides and polyols (FODMAPs), termed a low FODMAP diet, is now a widely used in the dietary management of IBS \(^5,6\). The low FODMAP diet consists of three distinct stages: FODMAP restriction (reduction in intake of all FODMAP carbohydrates); FODMAP reintroduction (FODMAP-containing foods are challenged in increasing amounts over a 3-day period whilst monitoring symptoms); and FODMAP personalisation (FODMAPs that were successfully challenged can be incorporated into the diet) \(^5\).

Most evidence for the low FODMAP diet investigates the initial FODMAP restriction stage. A meta-analysis of 12 randomised trials demonstrated the diet results in an average reduction of 45 points in the IBS Symptom Severity Score (IBS-SSS), a moderate impact given a minimally clinically important difference of 50 points \(^7\). Meanwhile, a recent network meta-analysis reported the low FODMAP diet was superior to habitual dietary advice, sham dietary advice and even standard IBS dietary advice (so-called ‘NICE dietary advice’) for achieving improvement in IBS symptoms \(^8\). However, a subsequent randomised comparative trial has reported the low FODMAP diet and the gluten-free diet to be no more effective than standard IBS dietary advice in symptom management \(^9\). Studies investigating long term outcomes of the low FODMAP diet (following the FODMAP personalisation stage) report continued symptom resolution in
many patients (10-13), nutrient intakes that are broadly similar to baseline (10,11) and satisfaction with dietary intervention (13).

In view of these results, guidelines from both the British Dietetic Association (6) and the National Institute for Health and Clinical Excellence (14) recommend standard IBS dietary advice as a first line approach (regular meal pattern, aligning fibre intake with symptoms, avoiding excess fat, chilli, caffeine), due to its simplicity in terms of both delivering the advice and lower burden for patients to follow. Where standard dietary advice does not result in adequate symptom resolution, then the low FODMAP diet should be trialled as second line approach (6,14).

The pooled global prevalence of IBS is somewhere between 1.5% to 4.1% (15), it is a common referral reason to secondary care gastroenterology (4) and patient satisfaction with medical therapy is variable (16). These, combined with both the interest of patients in using dietary therapy and the evidence for its effectiveness has led to an unprecedented demand for specialist dietitians in gastroenterology.

In the current issue of the Journal of Human Nutrition & Dietetics, Chan et al (17) report evidence regarding the effectiveness of low FODMAP dietary advice on gastrointestinal symptoms, stool output and anxiety and depression in 55 patients, the majority of whom (n=51) fulfilled criteria for IBS. Importantly, the intervention was delivered via group education, by a specialist dietitian, consisting of two 90-minute group education sessions for up to 12 patients. This study demonstrated that 54% of patients experienced clinically significant symptom improvement (≥50-point reduction in the validated IBS-SSS), combined with reductions in numbers with significant pain, bloating, flatulence, borborygmi, urgency, and lethargy, and a reduction in the proportion of
stools of abnormal consistency. There were no impacts upon anxiety or depression scores or the risk of eating disorders \(^{(17)}\).

This is only the second evaluation of group education in relation to the low FODMAP diet. A previous study, also published in the *Journal of Human Nutrition & Dietetics*, showed that in 263 patients with IBS who were provided low FODMAP dietary advice in groups, an identical proportion (54%) experienced clinically significant symptom improvement (measured as the numbers reporting ‘adequate relief of symptoms’), together with improvements in a range of cardinal symptoms of IBS \(^{(18)}\). This study compared clinical outcomes with a control group, albeit not randomly allocated, who received 1:1 low FODMAP dietary advice, and found largely similar results in clinical effectiveness between the two educational delivery approaches. Importantly, that study reported cost-effectiveness, with 1:1 education costing £139 per patient compared to only £67 in group education, which considering similar clinical outcomes represents a considerable cost saving \(^{(18)}\).

Clinical-effectiveness and cost-effectiveness are important features of any dietary intervention; however, the acceptability of group education is crucial to success. Both studies measured acceptability quantitatively using questionnaires, and both reported that approximately one third of patients receiving group education (35\% \(^{(17)}\), 36\% \(^{(18)}\)) would have preferred 1:1 education. Said another way, two thirds were either ambivalent or preferred group education.

Group education may therefore not be suitable for all patients. Both studies screened people considered less likely to benefit from group education, either from the referral letter \(^{(17)}\) or through a telephone call with the patient \(^{(18)}\). Criteria for not proceeding to group education were broadly similar in both studies, including English not as first
language, anxiety in group work, multiple morbidity that may require individual tailoring of advice and current or previous eating disorder. Future robust studies should not shy away from measuring the effectiveness of group education in such groups, but the safety, effectiveness and acceptability should be carefully considered, and importantly future studies and clinical application should allow for flexibility for 1:1 education where indicated based upon demographic and clinical need, or when a significant patient preference.

Group education is nothing new in dietetics. For example, there are seven randomised trials of group education for weight loss, which in a meta-analysis were shown to result in greater weight loss than 1:1 consultations (19). In diabetes, a randomised trial of dietary education (20) and meta-analysis of randomised trials of multicomponent diabetes education (including diet, medication, self-care) (21) reported similar or improved outcome when delivered in groups compared with either routine care or specifically with 1:1 consultations. Group education should not be viewed solely as a cost-saving exercise in which more patients can be seen at the same time. Rather, from the patient perspective, group consultations enable greater duration of exposure to the dietitian, whilst effective use of group education theory, collaborative facilitation, and peer support may provide equal or even improved outcomes, compared with 1:1 consultations.

Group education is a common quality improvement strategy aimed at improving patient education and efficiency of service delivery in dietetics (22) but is not the only novel approach to delivering dietary education by a specialist dietitian. For example, webinars have been used to provide first line dietary advice to patients with IBS, and in one evaluation, the majority of users reported high levels of satisfaction with webinars
alongside substantial improvements in patient knowledge and confidence in managing their condition, all of which resulted in a reduction in demand for 1:1 consultations with a specialist dietitian. The development and evaluation of online approaches to delivering dietary education are prescient in light of the COVID-19 pandemic and are likely to become more widely embedded in dietetic practice.

Elsewhere in gastroenterology, numerous other groups of patients with gastrointestinal disorders have specific nutritional needs combined with evidence of suboptimal availability of dietetic care. For example, dietary intake is impacted in many people with inflammatory bowel disease, including lower intakes of fibre, fruits and vegetables, and in which impairments in food-related quality of life are both burdensome and prevalent, despite which only a minority have received support from a dietitian or nutritionist. Meanwhile, in colorectal cancer nutritional concerns such as disease-related anorexia, dysgeusia and parosmia, and weight loss, are common and patients report they are unsure what they should eat, despite which a recent study reported the majority (69%) did not receive any nutritional advice throughout diagnosis, treatment and post-treatment. Therefore, the high-quality evidence of benefit from randomised trials in obesity and in diabetes, and the more preliminary evidence from uncontrolled or non-randomised trials in IBS support the investigation of novel dietary education approaches in these other gastrointestinal disorders.

These two studies provide tantalising evidence of effectiveness of group education for the low FODMAP diet in IBS that will reassure many dietitians already adopting such an approach. However, one is an uncontrolled trial and the other a non-randomised comparative trial. Both now provide exciting evidence to justify an
adequately powered, multi-centre, randomised trial that investigates clinical, economic, and patient-centred outcomes of group education compared with 1:1 dietary advice for the low FODMAP diet in IBS. Such complex interventions are best performed across multiple sites and in multiple healthcare settings both to increase power and to show universal application of the findings. However, multi-centre trials, relying on different specialist dietitians to deliver dietary advice also necessitates the assessment of fidelity of delivery of the group and 1:1 consultations. However, most important, is the consideration and inclusion of the patient experience in such studies. The best interventions are those designed with, and not just about, patients.
References


17. Chan MMH, Zarate-Lopez N, Martin L. Group education on the low FODMAP diet improves gastrointestinal symptoms but neither anxiety or depression in irritable bowel syndrome. J Hum Nutr Diet. 2022 (REF WILL NEED UPDATING AS THE PAPER IS PUBLISHED IN THIS ISSUE)


