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The development and evaluation of a nurse led food intolerance clinic in primary care

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ABSTRACT

Objective: To develop a clinic for patients who believe they have a food intolerance that could be administered by practice nurses with minimal experience of dietary change or food intolerance.
Methods: The clinic consisted of 1 week baseline, 2 weeks healthy eating plan (HE), 2 weeks wheat and dairy free plan (WD). Patients were discharged after the HE plan if their symptoms had improved, otherwise they continued onto the WD plan. Following training 4 nurses ran 4 clinics across the UK.
Results: 281 patients with perceived food intolerance were recruited. The most common symptoms were bowel symptoms, tiredness, stomach symptoms, and headaches. Of those who completed the programme (n = 150), the majority were discharged after the HE plan as their symptoms had improved (n = 106, 70.6%). A third also completed the WD plan (n = 44, 29%). Symptoms, mood and quality of life improved significantly by the end of the intervention. WD showed added value as symptoms showed further improvement.
Conclusion: There was a need for the clinic although not on a full time basis. Symptoms improved following both the HE and WD plans.
Practice implications: A simple dietary based intervention may help relieve symptoms in those who believe they have a food intolerance.

1. Introduction

Defining and diagnosing 'food intolerance' is problematic due to the range of terms used by both lay and scientific communities including 'adverse reactions to food', 'food allergy' and 'food intolerance'. Prevalence estimates in the community also range from 2% to 33% depending on the terms used and the mode of verification employed [1–5]. Evidence indicates, however, that 'food intolerance' is becoming an increasingly common presentation in primary care [1–5] with common symptoms including bowel and stomach problems, headaches and skin problems. Interviews with GPs, however, suggest that they are uncertain how to manage food intolerance [3] and patients indicate that health professionals are often unhelpful and unsympathetic [6]. To date, the only available services are either specialist allergy services which tend to prioritise patients with severe allergies or private medical care which is not accessible to all and raises concerns around standardisation and control [5,6]. Many individuals therefore rely on self-diagnosis, self-management or alternative practitioners which can result in the use of elimination diets that can be unnecessarily restrictive and even harmful to an individual's nutrition and health [7].

The present study therefore aimed to develop and evaluate a nurse led food intolerance clinic in primary care. The study used a pragmatic definition of food intolerance [8] focusing on symptom experiences rather than the underlying causal mechanisms which enables a set of criteria to be used in clinical practice which are derived from clinical observation. To this end the service was developed for perceived food intolerance and for those patients for whom other relevant diagnoses had been ruled out. In particular, the study aimed to assess the impact of the service on patient outcomes with a focus on symptoms, mood and quality of life.

2. Methods

2.1. Design

The service consisted of a healthy eating plan (HE) followed by a wheat and dairy free plan (WD). Measures were taken at the end of the sessions at baseline (time 1), end of healthy eating plan (time 2) and end of wheat and dairy free plan (time 3). The clinics ran for 24 months and were administered by 4 nurses in four General Practices across the UK: Birmingham, South London, Norfolk and Glasgow. These were identified to provide a heterogenous sample that varied in terms of geographical location, ethnic mix, social

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Table 1
Eating plans: healthy eating (HE) and wheat and dairy (WD) free plans.

	Foods to avoid	Foods to eat	General advice
Healthy eating plan	Caffeine Fizzy drinks Chemicals and additives Alcohol Sugar Highly processed foods Fast foods Takeaways Very spicy foods Less salt Less fat	Starchy foods Fruit and vegetables More fish Drink plenty of water Good intake of fibre Foods rich in vitamins and minerals	Cook more Eat out less
Wheat and dairy free plan	Any food prepared with wheat or dairy	Fresh meat and fish Eggs Oats, rice, rye flour, corn flour, buckwheat, barley Fruit Fresh nuts and seeds Salad Wheat free pasta Wheat free bread	Keep it simple Avoid sauces Detailed meal plans given

class and age and provided a combined population of 32,200 (aged 16 and over). Approval was obtained from MREC and the R and D committees.

2.2. Participants

Patients were included if they were aged 16 and over and reported experiencing symptoms that they believed may relate to a food intolerance. They were excluded for the following: diabetes, renal failure, Coeliac disease, Anorexia Nervosa or Bulimia, medically undiagnosed weight loss, learning difficulties, psychiatric illness, dementia or language barriers. Participants were recruited via self-referral either through a postal questionnaire sent to 20% of the patients at each practice or an advert placed in the waiting room. GPs also referred some patients directly. Analysis showed no differences between participants in terms of means of recruitment.

2.3. Developing the service

The service aimed to be an improvement on the current skill base in primary care and to offer a degree of expertise that could be taught to practice nurses with no prior knowledge in this area within a short time frame. It was also designed to feel personalised to the individual patient, yet follow a set protocol to ensure that the clinic procedure was replicable and could be offered as a pre-designed package to General Practices in the future. The service was designed in consultation with food intolerance specialists who advised that although dietary interventions for food intolerance are often highly individualised, there are some common culprits in food intolerance that can be identified using a food diary and detailed interview and are frequently the cause of some of the more common symptoms.

2.4. The service

The service offered each patient a maximum of four 50 min sessions over a 5-week period in which they followed a 2-week healthy eating (HE) plan, followed by a 2-week wheat and dairy (WD) free plan. Patients were discharged after the HE plan if both they and the nurse felt that their symptoms had been alleviated and that no further intervention was required or if they had been unable to adhere to the HE plan. They continued onto the WD plan if their symptoms persisted and it was deemed that they needed further help and dietary change. The dietary plans were devised to make them manageable for patients and are shown in Table 1.

2.5. Food and symptom diary

Patients were required to keep food and symptom diaries whilst they were attending the clinics, which were used as a tool for the nurse and patient to discuss the patients' dietary habits and possible links to symptoms.

2.6. Nurse training

The study employed four practice nurses with only minimal experience and knowledge of diet, behaviour change and food intolerance who were placed as additional staff into the practices. All were registered nurses, two had worked as research nurses, one had worked as a practice nurse and one was a district nurse. The nurses were recruited and trained by the researchers and a clinician who specialises in the management of food intolerance. Training involved familiarisation with the clinic procedure, training in food intolerance (e.g. detection of symptoms, possible causes, common food culprits, changing eating behaviour) and role plays to enable the nurses to manage patients and offer appropriate advice for food intolerance and dietary change. The initial training took place over two days at the University. Subsequent follow up training days were then provided every six months for the next 2 years which provided an opportunity to reflect upon their management of patients, describe any consultations they found problematic and have any questions answered by the research team and the clinician.

2.7. Measures

Participants completed validated measures of demographics, clinical history, aspects of symptoms (total no., no. attributed to food, frequency, severity), mood (profile of mood states, (POMS); GHQ12) and quality of life (physical health, mental health) [9–11] at baseline, end of the HE plan and end of the WD plan. Measures took about 20 min to complete.

2.8. Data analysis

The data were analysed to describe the demographics and symptoms of patients attending the clinic and to assess changes in symptoms, quality of life and mood following the intervention.