

Deadline for applications: Monday, 11 May 2020

School of Primary Care, Population Sciences and Medical Education, University of Southampton

1. Systematic review of the literature on the effect of herbs and spices on metabolic markers in patients with Type 2 Diabetes Mellitus.

Around the world, many herbs and spices are used for the management of type 2 diabetes. There have been several systematic reviews of the effect of herbs and spices on glycaemic control in type 2 diabetes mellitus, but none on their effect on combinations of metabolic markers such as HDL-Cholesterol, LDL-Cholesterol, total cholesterol, glucose, HbA1c, Systolic BP, Diastolic BP and weight change. There is limited evidence that addressing any of these markers individually impacts on cardiovascular events in diabetic patients. Therefore it is important to search for trials that have included a combination of these (with glycaemic control). This project would be a systematic review of randomised controlled clinical trials.

2. Attitudes and beliefs of South Asian overweight diabetic patients on diet and lifestyle interventions

Type 2 diabetes affects 4 million people in the UK with a high prevalence amongst ethnic minorities. Remission (cure) of diabetes can be achieved through weight loss, through physical activity and dietary changes.

Research priorities include improving our understanding of the determinants of dietary behaviour, and factors that might influence behaviour modification in South Asians, as well as qualitative studies leading to an enhanced understanding of cultural attitudes and beliefs, in order to inform the design of culturally sensitive and effective health promotional materials, community educational programmes, DVDs and toolkits.

The student will carry out interviews with overweight diabetic patients of South Asian origin in the UK to explore their views on physical activity and dietary changes that could help us to improve services for this group of patients. We would prefer a student who speaks a South Asian language fluently (eg Urdu, Hindi, Bengali) but it is not mandatory.

3. Views of South Asian women and their partners on family planning

Uptake of family planning is lower than the national average, and incidence of unwanted pregnancies is higher, among women of South Asian origin in the UK. The student will carry out interviews with women of reproductive age, of South Asian origin, in the UK and their partners, to explore their views on family planning, barriers and facilitators to use. We would prefer a student who speaks a South Asian language fluently (eg Urdu, Hindi, Bengali) but it is not mandatory. This will inform the development of culturally sensitive and effective health promotional materials, community educational programmes, DVDs and toolkits.

4. A systemic review of studies using population segmentation in type 2 diabetes

Type 2 diabetes is a heterogenous condition affecting 463 million people worldwide (IDF Atlas 2019). Population stratification is a term used interchangeably with segmentation and refers to clustering of people who relatively homogenous characteristics to allow more targeted and potentially effective care to be delivered. Clustering similar groups of people together could facilitate tailoring and personalisation of diabetes care which could lead to more efficient resource utilisation. Broadly, two major approaches for population segmentation have been utilised. These are either; i) expert-driven approaches using systematic reviews of the literature followed by a-priori, consensus defined criteria, or ii) data-driven segmentation which utilise empirical data to carry out post-hoc statistical modelling to generate clusters. Segmentation has previously established diabetes clusters based on, for example, sociodemographic variables, disease severity, genetic variables, healthcare utilisation or a combination of these and other factors. However, to date, there is no consensus on optimal segmentation approaches or which clustering variables to use. No previous review has been conducted collating studies on population segmentation in type 2 diabetes. To address this gap in the literature, we will systematically review the literature to synthesis previous works using population segmentation in type 2 diabetes.

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