Contents available at ScienceDirect

Diabetes Research and Clinical Practice

journal homepage: www.elsevier.com/locate/diabres

International Diabetes Federation

A community faith centre based screening and educational intervention to reduce the risk of type 2 diabetes: A feasibility study

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ARTICLE INFO

Article history:
Received 18 January 2016
Received in revised form
22 June 2016
Accepted 30 July 2016
Available online 6 August 2016

Keywords:
Public health
Screening
Prevention
Ethnic health

ABSTRACT

Aims: People of South Asian origin experience higher rates of diabetes and complications of diabetes compared to white Europeans. Therefore, it is important to identify those with undiagnosed diabetes and those at high risk of developing diabetes, in order to intervene with lifestyle intervention to reduce risk and prevent complications. We conducted a study to assess the feasibility of delivering a faith centre based pathway for screening and referral to group education for high risk individuals to increase screening uptake and reduce diabetes risk.

Methods: Opportunistic screening and early intervention strategy for people at risk of diabetes and cardiovascular disease in local faith centres. The screening consisted of a diabetes risk assessment tool and a near patient test for HbA1c. Participants found to be at high risk of diabetes (HbA1c 6–6.4%/42–46 mmol/mol) were offered a 'Walking Away from Diabetes' group educational intervention aimed at increasing exercise levels and reducing diabetes risk.

Results: 252 participants were screened during four screening events. 202 participants (80.2%) gave consent for their data to be included in the analysis. 72.4% of participants were found to have a high diabetes risk score. 32 participants (15.8%) had a HbA1c result (6–6.4%/42–46 mmol/mol). Eight participants (4.0%) had a (HbA1c $\geqslant$6.5%/$\geqslant$47 mmol/mol). Of those eligible for the diabetes prevention education programme, 18 participants (56.3%) attended.

Conclusions: This study confirms that screening followed by group education within faith centre settings is feasible and acceptable to participants. The strategies chosen were effective in achieving a high screening yield and high uptake of group education.

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http://dx.doi.org/10.1016/j.diabres.2016.07.025

1. Introduction

The prevalence of type 2 diabetes (T2DM) and people at high risk of T2DM in the UK have been rising at an increasing rate in the last two to three decades and both are predicted to continue to rise over the next five to ten years [1]. To address the rising prevalence of diabetes in the UK, there are plans to increase healthcare investment in programmes aimed at preventing or delaying the onset of T2DM and diabetic complications as part of the National Diabetes Prevention Programme (NDPP) [2,3]. Primary care based interventions such as the NHS health checks programme [4] promote risk assessment using risk scores [5], followed by early intervention to prevent lifestyle related diseases such as CVD and T2DM. Risk scores for T2DM tend to perform best in terms of correctly identifying those with T2DM and those at high risk if they are used in populations which are of a similar demographic to the population used to develop the risk score [5]. As a result of this, there are a number of different risk scores which have been developed and implemented globally. The Leicester Self-assessment Score (LSAS) has been developed to assess diabetes risk in an ethnic population in Leicester. The LSAS is a simple paper based questionnaire which allows calculation and understanding of diabetes risk. The risk score was developed using logistic regression using a large local dataset [6]. The risk score has been externally validated and performs well in the local population compared to other commonly used risk scores [5].

The focus on risk assessment and early intervention is particularly important for South Asian (SA) populations because they represent a significant proportion of the population in the UK [7] and are known to experience higher prevalence of diabetes and a disproportionate number and severity of diabetic complications [1,8]. SA populations may also be less likely to attend screening offered through general practices [9].

Systematic review evidence has shown that previous attempts to adapt screening and lifestyle interventions to SAs have met with limited success. In particular, low level of recruitment, retention and follow up of 'high risk' participants has hampered efforts to screen individuals from SA groups [10,11]. In addition to this, lifestyle interventions are often not sufficiently culturally tailored or are not informed by theoretical models and as a result, the methodological quality of relevant studies is often low [12]. There is also evidence of low uptake of screening attributed to factors including a fatalistic belief towards developing T2DM which may be relevant to informed decisions over screening behaviour or behaviour change [13,14]. Factors such as family dynamics can also mean that it may be difficult to attend health care settings without the support of other family members [15]. It has also been suggested that there is a low level of conceptual understanding of the risk of developing diabetes amongst some SA groups [15].

To address the lack of uptake of screening and lifestyle interventions, a different approach has been advocated which includes health promotion focussing on prevention delivered in faith centre settings. There is a small but growing body of literature reporting on such activities aimed at screening in these settings for cardiovascular risk factors such as blood pressure and cholesterol [16,17]. The key factors that have been identified in promoting uptake are linguistic and cultural competence in the context of effective communication of health advice [18] within these initiatives. Success in previous faith based screening interventions has also been attributed to the involvement of community volunteers and peer educators [17,19]. Involving members of the community in the design and delivery of interventions is important in overcoming barriers and meeting the needs of the community in relation to engagement in clinical trials [20–22].

In this paper we report the results of a feasibility study conducted in faith centre settings to provide T2DM screening and communication of risk, followed by referral to structured group education in Punjabi, Sikh and Gujarati Hindu communities in Leicester.

1.1. *Research aims*

The primary aim of this study was to assess the feasibility of faith centre based screening for T2DM and 'high risk status' and group education for those at high risk, in line with the recently published NICE guidance and recommendations on prevention [4].

The secondary aim was to evaluate the performance of the Leicester Self-assessment Score (LSAS) in a South Asian population.

2. Methods

2.1. *Screening pilot*

The screening methods described below were piloted on a small scale in a local mosque with approximately 25 participants in February 2013. Piloting the screening methods allowed the screening team to gain knowledge to inform the planning of the subsequent screening sessions as part of the study. The length of time needed to complete screening for each patient in addition to the resources required was used to inform the design and planning of further screening sessions as part of the study.

3. Ethical approval

Ethical approval was obtained from West of Scotland NHS research ethics committee 3, reference number 12/WS/0262. Favourable opinion was granted on 12th October 2012.

3.1. *Recruitment of screening sites*

An approach utilising a voluntary community partner group with existing links with local faith organisations was chosen in order to identify four screening sites. This partner organisation carry out similar events in the local area and their expertise and links were used in the planning