A scoping review on the experiences and preferences in accessing diabetes-related healthcare information and services by British Bangladeshis

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What is known about this topic?

- British Bangladeshis experience one of the highest rates of diabetes in the United Kingdom.
- Bangladeshis experience significant difficulties with literacy and communication issues in English which hinder access to healthcare.
- There is a high reliance on the utilisation of children as interpreters in the Bangladeshi community.

What this paper adds?

- Social networks including family and friends are an important resource in accessing diabetes-related healthcare information and services.
- Poor levels of diabetes knowledge exist amongst the Bangladeshi community.
- Religious fatalism and psychological distress were familiar themes and access to psychological services was uncommon.

Introduction

Diabetes mellitus is characterised by insulin deficiency and insulin resistance, and an estimated 285 million people are thought to be affected worldwide (DUK 2010). In

Abstract

Diabetes is a chronic condition requiring lifelong self-management. Patients are encouraged to access appropriate services to facilitate optimum management of diabetes. Although equitable access to healthcare in the United Kingdom is a legal right, not all groups and individuals in the community experience equity. Despite various equality laws and numerous efforts to minimise health inequalities related to access, particular community groups are more likely to experience inequitable access than others. The Bangladeshi community are one such community who experience some of the worst diabetes-related health outcomes in the United Kingdom. Little is known about their experiences and preferences in accessing diabetes healthcare information and services. Consequently, we undertook a scoping review of the literature by following the York Scoping Reviews Framework to identify the experiences and preferences of Bangladeshi patients and carers when gaining access to diabetes-related healthcare information and services. We identified eight articles and reported our results in relation to four domains of access: health service availability, health service utilisation, health service outcomes and the notion of equity. The review identified that language and literacy issues were the most common barriers hindering access to information and services. Patient knowledge regarding diabetes and its management was generally low, and friends and family were frequently being used as information sources and as informal interpreters. Additionally, there were feelings of isolation from mainstream information and services possibly resulting in the high prevalence of depression in the Bangladeshi community with women more affected than men. Social networks combined with religious and cultural beliefs as well as wider societal duties played a crucial role in accessing information and services for this population, and the identification of these issues merit further research and are possible avenues towards improved access to healthcare information and services for the Bangladeshi population.

Keywords: access, Bangladeshi, diabetes, ethnic, healthcare information, healthcare services

the United Kingdom, it affects more than 4% of the population, affecting more men than women. In 2008, 145 000 people were diagnosed with diabetes in the United Kingdom equating to approximately 400 new cases diagnosed every day (DUK 2010). It is estimated that a

further half a million people remain undiagnosed (DH 2008a). Type 2 diabetes affects more than 90% of diabetes patients and is one of the major risk factors for cardiovascular disease, the single largest preventable cause of death in the United Kingdom (DH 2001, ONS 2004, Scarborough *et al.* 2010) and worldwide (Lip *et al.* 2007).

Various factors contribute to the increased risk of developing diabetes, many of which are linked to poor socioeconomic status and include smoking, unhealthy diets and low levels of physical activity which can lead to obesity which is one of the main independent risk factors for Type 2 diabetes (DUK 2010). Additionally, there are strong genetic influences; individuals are 75% more likely to develop diabetes if both parents have diabetes (DUK 2010). Ethnic background is also strongly correlated with developing Type 2 diabetes and prevalence is up to three times more common in people of Black African and Black Caribbean origin and up to six times more common in people of South Asian backgrounds (including Bangladeshi, Indian, Pakistani and Sri-Lankan) (DH 2001, Chowdhury *et al.* 2006, DUK 2010).

Given the extent of microvascular and macrovascular complications associated with Type 2 diabetes (DH 2001, DUK 2010) and the enormous burden it places on individuals, families and national economies (Ramachandran *et al.* 2010), it becomes of paramount importance to provide individuals (including those at high risk) with the skills and knowledge to prevent the development of diabetes (DH 2001, 2008a). Adopting healthy lifestyle changes which include changes to diet, increases in physical activity levels and reduction in weight can all help towards diabetes prevention (NICE 2010).

Additionally, patients living with diabetes are required to attend regular screening as well as monitor and understand blood glucose readings (Ismail *et al.* 2004). Responding to dangerous symptoms of hypoglycaemia and hyperglycaemia, carbohydrate counting, adhering to oral medication and titrating insulin dosage for those on insulin are crucial components towards effective self-management (Ismail *et al.* 2004, Hirsch *et al.* 2005, Abrahamson 2010). Consequently, providing diabetes patients with the skills and knowledge to effectively self-manage their condition becomes extremely important (DH 2001, 2008a).

As such, patient empowerment and improving access to diabetes healthcare information on lifestyle issues, self-management, service availability, as well as improved access to diabetes services such as dietetic, podiatry, retinal screening, and psychological therapies, have been on the national agenda for over a decade (DH 2001, 2002, 2008a). Furthermore, the National Health Service (NHS) has made a pledge to ensure that healthcare services are appropriate to meet the needs of different groups of people in our society in order to reduce

existing health inequalities (DH 2001, 2010). The most recent White paper by the Coalition Government on Equity and Excellence within the NHS states 'Patients and carers will be able to access the information they want through a range of means, to ensure that no individual or section of the community is left out' (DH 2010).

However 'access to healthcare' is a complex concept that continues to evolve (Andersen *et al.* 1983, Dixon-Woods *et al.* 2006). Issues around access have been extensively covered in the literature across a range of healthcare disciplines with various interpretations in both definition and execution (Andersen *et al.* 1983, Gulliford *et al.* 2002, Dixon-Woods *et al.* 2006, Norris & Aiken 2006). For the purposes of this review, we refer to access as encompassing four different dimensions: health service availability, health service utilisation, health service outcomes and the notion of equity (Gulliford *et al.* 2002, Oliver & Mossialos 2004). Equity implies fairness in access to healthcare services for people who require them (Gulliford *et al.* 2002, Oliver & Mossialos 2004, DH 2008b). Szczepura (2005) and others have elaborated on equitable access as 'services that do not vary in quality because of a patient's personal characteristics such as age, gender, ethnicity, geographical location or socioeconomic status' (Millman 1993).

Where communities are not offered reasonable opportunities for equal access to and benefit from healthcare services, there are clinical consequences such as poorer health, higher mortality, reduced longevity, greater disease burden and consequently inequity (Marmot 2010). Whilst there have been commendable efforts by local and national government to reduce inequalities in access to healthcare services (Marmot 2010), there remains much disparity in the way some of the most vulnerable members of society, (including ethnic minority groups) gain access and negotiate their way through the healthcare system (Atkinson *et al.* 2001, Szczepura 2005, Randhawa 2007).

A large body of evidence suggests that ethnic minority groups are particularly affected by poor access to healthcare (Atkinson *et al.* 2001, Szczepura 2005, Randhawa 2007), partly as a consequence of migration (Greenhalgh *et al.* 1998, Scheppers *et al.* 2006, Kristiansen *et al.* 2007, Grace *et al.* 2008, Khunti *et al.* 2009) encompassing the existence of deep rooted cultural and religious beliefs (Scheppers *et al.* 2006), changes to lifestyle, lack of acculturation, limited knowledge and awareness of the healthcare system and poor communication skills in English (Merrell *et al.* 2005, Szczepura *et al.* 2005, Khunti *et al.* 2009, Allmark *et al.* 2010).

Although recent evidence suggests few ethnic inequalities in access to primary care services in relation to diabetes exist, inequalities in access to specialist secondary care services remain (Nazroo *et al.* 2009). Higher

utilisation of primary healthcare services (which may be an indicator of greater need) (Nazroo 1997, Dixon-Woods *et al.* 2005, Sproston & Mindell 2006), subsequent lower rates of referral (Bhopal 2002, Gill *et al.* 2007, Fischbacher *et al.* 2009), lower usage of secondary (BHF 2007, Mindell *et al.* 2008) and tertiary healthcare services (Gill *et al.* 2007) have been reported for minority groups. Additionally, the evidence suggests that ethnic minority groups experience longer waiting times for appointments (DH 2004, Mead & Roland 2009), have fewer follow-up services (Scarborough *et al.* 2010), experience significant communication problems (DH 2008b), endure poorer health outcomes and are generally dissatisfied with healthcare services and the information received (DH 2008a,b). Unless these problems are addressed, these barriers are likely to increase the severity of illness and the rates of complications, placing additional demand on the NHS.

Amongst the UK's ethnic minority groups, of particular concern are the Bangladeshi community (Bhopal 2002), who form 0.5% of the UK population and approximately 6% of the ethnic minority population (ONS 2004). UK Bangladeshi men and women have the highest age-standardised risk ratios for developing diabetes (Rhodes *et al.* 2003) and also experience one of the highest rates of cardiovascular disease (Bhopal *et al.* 1999, Bhopal 2002, Chowdhury *et al.* 2006). They also exhibit the lowest physical activity levels (Bhopal *et al.* 1999, Fischbacher *et al.* 2004) and have the worst lipid profiles suggestive of an unhealthy diet (Chowdhury *et al.* 2006). Bangladeshi men have the highest rates of smoking (Patel *et al.* 2007), and in general, Bangladeshis report the worst overall health (Calderwood & Tait 1999, Piggot 2004, BHF 2007). Furthermore, Bangladeshis are one of the most socio-economically disadvantaged groups in the United Kingdom compared with other ethnic minority groups and the general population (Greenhalgh *et al.* 1998, Bhopal *et al.* 2002, ONS 2004, Jayaweera *et al.* 2007, Allmark *et al.* 2010). It is well known that a poorer socioeconomic status is strongly associated with access issues in health care and correspondingly poorer health outcomes (Nazroo 2001, Bhopal 2002, Bhopal *et al.* 2002, Nazroo *et al.* 2007, Khunti *et al.* 2009). Additional barriers that prevent Bangladeshis from accessing mainstream healthcare services include poor literacy and communication skills in English (Rhodes & Nocon 2003, Lloyd *et al.* 2008, Allmark *et al.* 2010). They have the lowest levels of educational attainment in the United Kingdom compared with all other communities (Bhopal 2002, Bhopal *et al.* 2002, Piggot 2004, Allmark *et al.* 2010) and have some of the lowest levels of health literacy (Grace *et al.* 2008). The majority of British Bangladeshis originate from the Sylhet region of Bangladesh and speak the Sylheti dialect,

which has no written form, thereby making it difficult to access written information (Rhodes *et al.* 2003, Lloyd *et al.* 2008). Whilst younger second and third generations are likely to have some formal education and be fluent in English, with better knowledge of negotiating the healthcare system (Rhodes *et al.* 2003), the opposite is true for the majority of the community elders (first generation) who have had little or no formal education, are unable to speak fluent English and possess little knowledge of the UK healthcare system (Rhodes *et al.* 2003, Choudhury *et al.* 2009).

Although information alone is not sufficient for behaviour change and improved outcomes (Alberti *et al.* 2007), without appropriate access to healthcare information and services, desirable behaviour change is unlikely, leading to the poor uptake of services, poor self-care and ultimately poor clinical outcomes (DH 2004, Szczepura 2005, Knight *et al.* 2006). The provision of appropriate and accessible health education information has the potential to improve patient knowledge and awareness, thereby helping to prevent diabetes, promote self-management and improve long-term clinical and psychosocial outcomes (Nutbeam 2000, DH 2007).

However, providing relevant information and services in an appropriate manner and medium to patients with diabetes who possess poor communication and literacy skills is a complex and multifaceted problem (Greenhalgh *et al.* 2005, Grace *et al.* 2008). Whilst previous research studies have attempted to increase our knowledge in relation to the understandings, beliefs, attitudes and behaviours of Bangladeshi communities (Greenhalgh *et al.* 1998, 2005, Rhodes & Nocon 2003, Grace *et al.* 2008, Choudhury *et al.* 2009), there is little evidence on how the Bangladeshi community gain access to diabetes-related information and services and if those services meet the needs of the Bangladeshi population (Rhodes *et al.* 2003). It is therefore important to identify the Bangladeshi population's preferences and experiences regarding access to information and services, including the content, complexity, delivery mode and settings. A greater understanding of the factors that can influence access, including identifying the barriers and facilitators to access, may lead to improved service delivery with the potential to improve the healthcare of patients.

Methods

We aimed to conduct a review of the literature to determine (i) the extent and nature of existing literature, (ii) to summarise the available evidence and (iii) to identify any gaps in the literature.

The University of York's methodology for undertaking scoping reviews provided an appropriate framework

to undertake such a review (Arksey & O'Malley 2005). The highly iterative process embedded in the methodology and its aim to capture all literature regardless of study design and quality (unlike most other approaches to mixed-methods synthesis) particularly suited this review.

We followed the five stages for undertaking a scoping review, which included (i) identifying the research question, (ii) identifying relevant studies, (iii) selecting appropriate studies, (iv) charting the data and (v) collating, summarising and reporting the results (Arksey & O'Malley 2005). Our scoping review did not include the optional consultation exercise (the sixth phase) (Arksey & O'Malley 2005). Furthermore, scoping review methodology does not aim to assess the quality of included studies, given the breadth of topics usually included and the potential diversity of study designs (Arksey & O'Malley 2005). However, we have provided summaries of quality assessment using the most appropriate tools developed by the NHS Public Health Research Unit (PHRU 2006) to enhance the review.

Framework stage 1: Developing the research question

Scoping reviews aim to achieve in-depth and broad results as they attempt to identify all relevant literature regardless of study design and quality (Arksey & O'Malley 2005). One of its key strengths is redefining search terms as familiarity with the literature grows. Unlike a conventional systematic review, this iterative process allows for the inclusion and exclusion criteria to be developed post hoc (Arksey & O'Malley 2005, Brien *et al.* 2010). This approach subsequently re-defined our research question and objectives and enabled the inclusion of literature that included patients with comorbidities, carers and significant others.

Research question

What are the experiences and preferences of Bangladeshi patients and carers in gaining access to diabetes-related health care information and services?

Secondary objectives

More specifically, the present review aims to address the following questions:

- 1 What are the key barriers and facilitators affecting access to diabetes healthcare information and services for Bangladeshis?
- 2 What are the preferred sources and forms of information for Bangladeshis?
- 3 What are the levels of knowledge regarding diabetes within the Bangladeshi community?

Framework stage 2: Identifying relevant studies

The literature was searched using the specified search terms listed in Table 1 in the following databases from their commencement to January 2010: The Allied and Complementary Medicine Database (AMED) (1985–September 2010), CAB Abstracts (1973–September 2010), CINAHL (1980–September 2010), EMBASE (1980–September 2010), Evidence Based Medicine (EBM) Reviews (1991–2010), GEOBASE (1994–September 2010), Ovid Medline (1950–September 2010), PsycINFO (1950–September 2010) and the Social Sciences Citation Index (1980–September 2010). Additionally, the NHS specialist library for ethnicity and health (<http://www.evidence.nhs.uk>) and evidence-based reviews including the Cochrane database (<http://www.Cochrane.Org>) and DARE (<http://www.crd.york.ac.uk/crdweb>) were searched with adapted search terms where applicable.

To complement the electronic database search, we identified three online journals: Ethnicity and Health, Diversity in Health and Social Care and Health and Social Care in the Community which were additionally searched using keywords as search filters. Reference lists of key articles related to accessing healthcare for minority groups were scanned for potentially relevant articles. We also used Google Scholar to undertake searches using keywords. The search results were imported into Endnote to store citations and track the abstract and article review process. The search strategy was revisited and updated in September 2010 and is summarised in Table 1.

Table 1 Medical subject headings used during electronic database searches

Populations	[Bangladesh* or Bengal* or Bangal* or Sylhet* or Shylhet*] (mP = ti, hw, ab, it, sh, tn, ot, dm, mf, bm, tc, id) AND
Disease conditions	[diabetes or mellitus or NIDDM or MODY or T2DM or type 2 or type 1 or gestational or insulin resistance or impaired glucose] (mP = ti, hw, ab, it, sh, tn, ot, dm, mf, bm, tc, id) AND
Interventions	(All types of studies were eligible, and therefore, restrictions were not placed on study design)
Outcomes of interest	[access* or gain* or obtain* or receive* or Information or education or knowledge or health care or services or primary or secondary or tertiary or doctor or nurse or literacy or Illiterate or uneducated or untrained or linguistic or communication or written or oral or interpret* or translat* or advice or educat* or skill* or Instruct* or coach* or tutor* or train* or learn* or taught] (mP = ti, hw, ab, it, sh, tn, ot, dm, mf, bm, tc, id)

Eligibility criteria

Articles that discussed access issues related to diabetes information and services for the Bangladeshi population were eligible. Articles that included co-morbidities, patients and carers as well as articles published in any language and in any country were also eligible. There were no restrictions on the study design, participant's age and generation or type of diabetes. Articles that included mixed populations were excluded because of the heterogeneity between different ethnic groups (Bhopal 2002).

Framework stage 3: Study selection

The eligibility criteria were consistently applied by one reviewer to all the abstracts retrieved from the searches. Where there was ambiguity or uncertainty from the abstract alone the full paper was obtained and scrutinised for its eligibility in the review. By using the iterative process for scoping reviews (Arksey & O'Malley 2005) and not restricting the review to type 2 diabetes and including patients with co-morbidities carers and significant others led to the identification of four further studies that contributed to the overall number of included studies.

From a total of 773 references, 704 references were judged not to be relevant and were excluded based on the abstract alone. Sixty-nine full text papers were obtained and read in full by one reviewer. From these, 12 papers describing eight studies were eligible and included in the review. Four papers were duplicate publications reporting on a particular angle of an already included study. The duplicate publications were scrutinised and were judged to add nothing further to their associated papers, and on that basis, the duplicate publications were excluded (Figure 1).

Quality assessment

The quality of studies were assessed by one researcher using the Critical Appraisal Skills Programme (CASP) tools developed by the Public Health Resource Unit, England (2006). Six qualitative studies were assessed using the qualitative CASP tool (Table 2) and the randomised controlled trial (RCT) was assessed using the CASP RCT tool (Table 3). For the purposes of illustrating the quality assessment process in Tables 2 and 3, only abridged versions of the CASP questions are provided. It was not possible to assess the quality of the pragmatic diabetes self-management education class during Ramadan (Chowdhury *et al.* 2003) as this was a process evaluation. The only CASP evaluation tool available was deemed inappropriate as this was an economic evaluation tool and the paper in question possessed no economic components. Despite this and considering that formal quality assessment are not typical for scoping reviews, the article

Figure 1 Flowchart of the review process.

was judged to contribute towards the overall aims of this review, and hence, we justify its inclusion.

Framework stage 4: Charting the data

The fourth step in the review process involves reading and re-reading the text to identify and 'chart' key emerging themes that support and contradict emerging ideas from all the papers included in the review (Ritchie & Spencer 1994, Pope *et al.* 2000).

A standard data extraction sheet was developed and refined as familiarity with the included papers grew to capture all relevant aspects of our research aims and questions. The template included descriptive characteristics of included studies such as author(s), country, setting, study design and more detailed accounts of individual study aims, patient experiences and preferences regarding access, barriers and facilitators to access, levels of diabetes knowledge, the study's main findings and conclusions. We then utilised the conceptual framework of 'access' (availability, utilisation, outcomes and equity of services) (Gulliford *et al.* 2002) to chart our extracted data using Excel.

Framework stage 5: Collating, summarising and reporting the results

Stage 5 of the scoping review aims to provide a coherent structure to the literature so that it can be contextualized by the reader. However, unlike other scoping reviews

Table 2 Quality criteria and results of qualitative studies ($n = 6$)*

	Quality criteria met		
	Yes	No	Unclear
1. Was there a clear statement of the aims of the research?	5	1	0
2. Is a qualitative methodology appropriate?	6	0	0
3. Was the research design appropriate to address the aims of the research?	5	1	0
4. Was the recruitment strategy appropriate to the aims of the research?	4	1	1
5. Were the data collected in a way that addressed the research issue?	5	1	0
6. Has the relationship between the researcher and participants been adequately considered?	3	2	1
7. Have ethical issues been taken into consideration?	6	0	0
8. Was the data analysis sufficiently rigorous?	4	1	1
9. Is there a clear statement of findings?	4	1	1
10. Is the research valuable?	6	0	0

*Adapted from © Public Health Research Unit, England 2006.

Table 3 Quality criteria and results of RCT ($n = 1$)*

	Quality criteria met		
	Yes	No	Unclear
1. Did the study ask a clearly focused question?	1	0	0
2. Was this a randomised controlled trial and was it appropriately so?	1	0	0
3. Were participants appropriately allocated to intervention and control groups?	1	0	0
4. Were participants, staff and study personnel 'blind' to participants' study group?	1	0	0
5. Were all the participants who entered the trial accounted for at its conclusion?	1	0	0
6. Were the participants in all groups followed up and data collected in the same way?	1	0	0
7. Did the study have enough participants to minimise the play of chance?	0	1	0
8. Were the results presented in a meaningful way with the main results being discussed?	1	0	0
9. Are the results precise enough to make a decision?	1	0	0
10. Were all important outcomes considered so the results can be applied?	1	0	0

*Adapted from © Public Health Research Unit, England 2006.
RCT, randomised controlled trial.

(Weeks & Strudsholm 2008, Brien *et al.* 2010, Manthorpe *et al.* 2010), our review did not reveal a large body of evidence, despite the relatively comprehensive and broad search strategy used. It is likely that the dearth of evidence for this population resulted in the low number of papers retrieved. Nonetheless, we aimed to provide a narrative account of the included studies in two ways. First, we reported the results in relation to the four thematic components of access (Gulliford *et al.* 2002), and second, we used this opportunity to identify gaps in research knowledge.

Results

Overview

There is a clear lack of research on access to health care for Bangladeshi patients with diabetes. Given that the few included studies varied considerably in their aims and designs, it was not possible to analyse the studies by

study design. We provide a brief description of the studies below, followed by a narrative summary of the key themes emerging from the literature in relation to the various domains of access (Gulliford *et al.* 2001, 2002). Details of the eight included studies are provided in Table 4.

Study designs

Four studies delivered an intervention, ranging from a RCT (Griffiths *et al.* 2005) to a process evaluation of a pragmatic diabetes education class (Chowdhury *et al.* 2003). One study reported on the early developmental phases of an action research project which contained qualitative elements (Greenhalgh *et al.* 2005). One study delivered a modified version of the Expert Patient Programme (Cade *et al.* 2009) to Bangladeshi patients and reported on the participant's understandings and beliefs of diabetes in a qualitative paper (Choudhury *et al.* 2009). Four other qualitative papers reported on factors

Table 4 Characteristics of included studies

Author, year, city, country	Aims	Design type	Participants/settings	Principal findings
Choudhury <i>et al.</i> (2009) Swansea and Birmingham, UK	Understanding the beliefs of diabetes in the UK Bangladeshi population	Qualitative study	14 participants Age range: 26–67 4 men and 10 women One to one structured interviews undertaken at patient homes with diabetes patients who were invited to attend a peer education programme Recruitment was through word of mouth, posters and announcements at the local mosque. Time constraints restricted the number of participants involved	Friends and family were important sources of advice on diet and exercise. However, the majority of participants had poor knowledge of the causes of diabetes and its prevention and were passive about their own self-management. Most patients claimed to understand information provided by their HCP regarding diet either because they spoke English or their HCP was Bengali. Some relied on children interpreters The majority felt that diabetes education is important (although only 3 had attended education programmes), but some felt that current information was not useful, and some felt that they had to be content with the information provided by HCP as they had no other alternative. On occasions this led to patients accessing the help of children causing them to feel bad and guilty Access to information and experiences were also influenced by location of practices and the availability of Bengali-speaking doctors
Grace <i>et al.</i> (2008) London, UK	To understand lay beliefs and attitudes including that of religious teachings and professional perceptions in relation to diabetes prevention	Qualitative study	80 participants without diabetes Mean age: 35 years 37 men and 43 women 29 Islamic scholars and religious leaders Mean age: 35 years 14 men and 15 women 28 healthcare professionals Mean age: 41 3 men and 25 women Focus groups and semi-structured interviews set in Tower Hamlets. Recruitment of lay participants was through community centres, mosques and GP practices with information being provided in written English and Bengali as well as orally in Sylheti	Participants, particularly the first generation, identified poor fluency in English as a major barrier to accessing and understanding basic health information. Although knowledge of diabetes was found to be generally high, information was primarily obtained through the experience of diabetes in a relative or friend. There was a heavy reliance on friends and family to interpret health information for them Healthcare professionals faced substantial barriers when attempting to communicate basic lifestyle information, including: time pressures, difficulties with interpreters and limited knowledge of the patient's culture Religious leaders and lay participants felt that faith could be one mechanism by which information could be conveyed. Many first-generation participants held fatalistic views, and there were strong cultural norms (especially for women) which prevented the adoption of healthy lifestyles. Women were also more likely to have poor mental well-being and ill-health. Poor availability of local services and practical and material constraints restricted the utilisation of wider services. This made adopting a healthy lifestyle difficult for many

Table 4 (Continued)

Author, year, city, country	Aims	Design type	Participants/settings	Principal findings
Greenhalgh <i>et al.</i> (2005) London, UK	To develop a complex intervention for diabetes education for ethnic minority groups who do not speak English	Action Research	8–42 regular participants over an 18-month period based in a community hospital setting. (Patient characteristics not specified other than elderly Bangladeshi women) The group was established through word of mouth	A weekly story-telling group revealed that the group of Bangladeshi women preferred an informal environment to discuss and learn topics. Conversations seemed chaotic with multiple conversations going on at the same time and often the HCPs stepped in to resolve disputes A narrative written by a bilingual health advocate describes how a Bangladeshi first-generation woman was experiencing significant difficulties and learning about the onset of diabetes led to depression. She was heavily reliant on wider family members as she did not know what to do (including administering insulin). The example reports how the link worker's were able to bridge the communication and cultural gaps by monitoring her and informing the HCPs of her progress. The main objective for the participants was to know what to do about diabetes and most would attend to check their blood glucose readings (despite being provided their own devices). The informal group provided a forum to exchange information and advice. The authors report an example of a participant's GP dismissing claims that she had diabetes despite having very high blood glucose readings during the sessions There was evidence that mean glucose concentrations of long-term attenders decreased over time. A focus group evaluation conducted 1 year from the beginning revealed that the 'story telling group' was well received and appreciated by the participants
Griffiths <i>et al.</i> (2005) London, UK	To determine the effectiveness of a culturally adapted lay-led self-management programme	Randomised Control Trial	476 participants with diabetes and chronic disease comprising of cardiovascular musculoskeletal and respiratory conditions Intervention group 238 participants (66% diabetes) Mean age: 48.9 105 men and 133 women Control group 238 participants (71% diabetes) Mean age: 48.0 99 men and 139 women The programmes were delivered by accredited Bangladeshi lay tutors living with chronic conditions in GP practices or community centres Recruitment included writing to patients on the disease register in English followed by telephone calls by Sylheti speakers	Information during recruitment and during the intervention was provided through video cassettes and lay-led expert patients able to speak in Bengali, thereby overcoming language barriers Patients receiving the education intervention showed improvements in self-efficacy, improvements in self-management behaviours and reduced HADS depression scores. There were no improvements in any other outcome measures including communication with GPs and frequency of visits to GPs and clinical measures were not collected Follow-up work revealed that social and religious barriers hindered attendance. Wider societal duties such as caring, cooking and attending healthcare appointments took precedence The cost of the programme was £123 per participant

Table 4 (Continued)

Author, year, city, country	Aims	Design type	Participants/settings	Principal findings
Merrell <i>et al.</i> (2005) Swansea, UK	To identify the health and social care needs of informal carers of Bangladeshi relatives living with chronic conditions	Qualitative study	20 informal carers Age range: 16–62 years 4 men and 16 women Nine cared for patients with diabetes, six for gastrointestinal problems, five for cardiac problems including hypertension, three for lung cancer and one for respiratory ailments. One-to-one interviews with carers Recruitment was through purposive and snowball sampling with information being provided in written English and Bengali as well as oral explanations 120 patients attended the group educational class (patient characteristics not specified). A 3-hour class involving Bengali diabetes link worker a senior diabetes specialist nurse and a GP. Additionally, a telephone help line service was provided for urgent advice as well as a drop-in session Recruitment was through written invitations, and advertisements with posters at GP's surgeries, diabetes clinics, local mosques and community centres	Bangladeshi carers and patients faced numerous barriers when accessing health and social care services. The lack of knowledge regarding the availability of services was most prominent resulting in heavy reliance on close family and community networks and resources, especially through the use of word of mouth. There was a resistance to accepting formal care with fears that they would not meet cultural and religious needs The doctor was viewed as the most important source of information though the information was not always understood leading to the use of older children as interpreters and translators. This led to adverse effects on children such as damaging their education. Language barriers were common and the burden of caring was mainly on women causing significant suffering The educational classes were well received and appreciated by all the participants (outcome measures were not reported). In addition to the classes approximately 5–7 calls were received each day and 5–7 visits were made by patients to the drop-in sessions In addition to the HCPs, advice was offered by religious leaders re-enforcing health messages and dispelling myths with regards to fasting obligations and health. However, patients were unwilling to attend outpatient clinics or have blood tests carried out during the month of Ramadan due to strong religious beliefs. The authors report to overcoming this by not booking outpatient clinics over this time period The authors also suggest that in coming years fasting will become longer as a result of the Islamic lunar calendar when Ramadan begins 10 days earlier each year. The summer months will be particularly challenging for diabetes patients and the authors highlight how the Bangladeshi population may need additional help in coming years Many patients accessed their GP's for information and services but felt that their needs were neglected by their HCPs and the patients were often resigned to a fatalistic acceptance of the minimal information and services they were provided with. Patients were largely unaware of the care they might expect or of the full range of services available. There were views that the information provided was not in appropriate formats and that HCPs had little knowledge and understanding of patient needs The presence of Bengali-speaking doctors reduced communication barriers for some, but there were still reports of poor levels of diabetes knowledge and wide spread dissatisfaction with the care they received, which included service level barriers such as appointment systems and poor availability of alternative sources of information Friends/family and community networks were seen as an important source of information and children (of working, college and school age) were frequently used as interpreters causing significant disruption to patients and their children Women were particularly disadvantaged through their heavy reliance on family members, fear, lack of social support and poor access and familiarity with public transport
Chowdhury <i>et al.</i> (2003) London, UK	To provide an educational class on diabetes self-management during Ramadan	Process evaluation		
Rhodes <i>et al.</i> (2003) Bradford, UK	An investigation into access from the point of view of Bangladeshis	Qualitative study	12 Bangladeshi first-generation patients with type 2 diabetes Age range: 43–75 years 4 men and 8 women One-to-one semi-structured interviews, carried out by a Sylheti speaker in patient's homes Recruitment involved purposive sampling from disease registers followed by sending out letters and telephone calls by a Sylheti speaking interviewer	

Table 4 (Continued)

Author, year, city, country	Aims	Design type	Participants/settings	Principal findings
Greenhalgh <i>et al.</i> (1998) London, UK	To investigate the health beliefs and folk models of diabetes in British Bangladeshis	Qualitative study	40 patients with diabetes Age range: 21–80 23 men and 17 women Qualitative study using narratives, semi-structured interviews, focus group, structured vignettes and pile sorting exercises Recruitment included sending letters followed up by telephone calls, opportunistically through the practice reception as well as manually searching through patient case notes	<p>Lay sources of information was the most popular source of information with 17 of the 18 participants in the structured vignette agreeing that this was the best way to learn about diabetes. However, overall knowledge regarding diabetes (management and preventative care) appeared to be poor. Participants reported other practical difficulties in living with diabetes including language barriers when speaking to HCPs, the use of children as interpreters and the inability to understand written leaflets, the lack of availability of local facilities. Women were reported to be particularly affected as they rarely left their homes</p> <p>Fatalistic attitudes were common amongst the group, and many informants reported the presence of physical or psychological stress</p> <p>The majority of participants viewed the doctor as an important authoritative and knowledgeable professional, and nurses were sometimes viewed as a source of information and advice</p>

affecting access to diabetes healthcare information and services (Greenhalgh *et al.* 1998, Rhodes *et al.* 2003, Merrell *et al.* 2005, Grace *et al.* 2008).

The narrative synthesis enabled the identification of several important themes for each of the four domains of access which we discuss in turn later.

Access and availability

Poor availability of appropriate information sources

Bangladeshis reported major difficulties in accessing and understanding available health information. This was often as a result of limited literacy and communication difficulties and the limited availability of appropriate information sources (Greenhalgh *et al.* 1998, Rhodes *et al.* 2003, Merrell *et al.* 2005, Grace *et al.* 2008, Choudhury *et al.* 2009). In some instances, information was not reaching those in need (Merrell *et al.* 2005), some were unable to understand leaflets because they were too complicated or were in printed format in English and Bengali (Greenhalgh *et al.* 1998, 2005). Others reported that doctors did not provide any information (Rhodes *et al.* 2003) or that they were not satisfied with the information they were given (Rhodes *et al.* 2003, Choudhury *et al.* 2009).

Studies highlighted how healthcare professionals also found it difficult to communicate basic lifestyle information to Bangladeshis (Rhodes *et al.* 2003, Grace *et al.* 2008). Their limited understanding of cultural aspects of lifestyle as well as the difficulties with interpreted consultations and the lack of availability of time compounded the problems (Rhodes *et al.* 2003, Grace *et al.* 2008).

Patient's practical and material constraints

Bangladeshi people rarely travelled beyond their local neighbourhoods because of practical and material constraints, and this resulted in a high reliance on the local provision of services and facilities (Greenhalgh *et al.* 1998, Rhodes *et al.* 2003, Merrell *et al.* 2005, Grace *et al.* 2008, Choudhury *et al.* 2009). The lack of personal transport (Rhodes *et al.* 2003, Merrell *et al.* 2005), poor availability of local facilities for exercise (Greenhalgh *et al.* 1998, Grace *et al.* 2008, Choudhury *et al.* 2009) and the poor provision of access to affordable healthy foods made it difficult for Bangladeshis to access those services despite having some knowledge of their benefits (Greenhalgh *et al.* 1998, Grace *et al.* 2008, Choudhury *et al.* 2009).

Low car ownership, low social economic status (Rhodes *et al.* 2003, Grace *et al.* 2008), limited familiarity in using public transport services (Choudhury *et al.* 2009), fear of travelling beyond their locality because of street crime and poor fluency in English (especially for

women) (Greenhalgh *et al.* 1998, Grace *et al.* 2008) were barriers to access. One study reported how Bangladeshi patients were being referred back to their GP from specialist care as a result of not being able to keep clinic appointments owing to practical rather than clinical reasons (Rhodes *et al.* 2003).

Availability of Bengali speaking healthcare professionals

In some areas, the availability of Bengali-speaking doctors facilitated patient communication (Greenhalgh *et al.* 1998, Rhodes *et al.* 2003, Grace *et al.* 2008, Choudhury *et al.* 2009). However, this did not always lead to patient satisfaction and on occasions caused tensions between the patient and practitioner. Despite this, patients were reluctant to move practices because of a lack of alternatives, given the language barriers (Rhodes *et al.* 2003). In some instances, the absence of Bengali-speaking healthcare professionals were seen as a disadvantage, which led to patients having limited awareness and access to support (Merrell *et al.* 2005) and limited understanding of basic lifestyle information (Grace *et al.* 2008, Choudhury *et al.* 2009).

Access and utilisation

Limited literacy and communication difficulties affected utilisation

Poor communication skills and poor fluency in English hampered the ability of patients to utilise services to the best of their ability. There was a general lack of awareness and knowledge of the services and support available to patients and carers, and this led to limited utilisation of services such as diabetes education programmes (Choudhury *et al.* 2009), support services from nurses and health visitors (Merrell *et al.* 2005), and dietetic, retinal screening and podiatry services (Rhodes *et al.* 2003). Language barriers also delayed utilisation of services (sometimes for years) owing to absent family members, particularly for women who required interpreters and chaperones and who were more reliant on wider family members to communicate with healthcare professionals (Greenhalgh *et al.* 1998, 2005, Rhodes *et al.* 2003, Merrell *et al.* 2005, Grace *et al.* 2008, Choudhury *et al.* 2009).

Psychological distress

All but one of the included studies (Choudhury *et al.* 2003) refer to the presence of stress in the Bangladeshi community, yet only one study discussed accessing specialist counselling services (Merrell *et al.* 2005). Stress was particularly common amongst women and was largely attributed to fatalistic views, a lack of understanding of their condition and fear (Greenhalgh *et al.*

2005, Choudhury *et al.* 2009), feelings of isolation (Greenhalgh *et al.* 1998, Grace *et al.* 2008), beliefs that stress contributed to their diabetes (Greenhalgh *et al.* 1998, Grace *et al.* 2008) and the inability to communicate with healthcare professionals (Rhodes *et al.* 2003, Greenhalgh *et al.* 2005). One study formally measured depression and highlighted the presence of depressive symptoms using the Hospital Anxiety and Depression Scale (HADS) in which there were slight improvements for those who attended three or more sessions (Griffiths *et al.* 2005).

Effects of tailored interventions on service utilisation

Four interventions provided tailored educational programmes to Bangladeshis. Of the two structured interventions, rates of utilisation were low. For the Expert Patient Programme, approximately 50% of those who registered, attended (Choudhury *et al.* 2009). Similarly, 51% of intervention participants attended three or more sessions of the Chronic Disease Self-Management Programme (Griffiths *et al.* 2005). The less structured components of the Expert Patient Programme were reported to be preferred by participants (Choudhury *et al.* 2009).

Rates of service utilisation for the remaining two interventions are more difficult to interpret as they had no pre-determined targets. However, the Ramadan diabetes education classes were utilised approximately 300 times over a 3-month period (through a mixture of classes, ad-hoc phone access and drop-in access) (Choudhury *et al.* 2003). The action research programme, which was also less structured, grew from eight to 42 regular attenders over an 18-month period (Greenhalgh *et al.* 2005).

Cultural and religious influences affected service utilisation

Cultural and religious norms affected the utilisation of services. The utilisation of exercise facilities was poor (Greenhalgh *et al.* 1998, Choudhury *et al.* 2009) and deemed socially inappropriate (especially for women and first generation patients) (Greenhalgh *et al.* 1998, Grace *et al.* 2008). The uptake of healthy lifestyle choices such as exercise was also influenced by financial constraints as well as the inability to find childcare, lack of time and difficulties with accessing exercise venues outside their locality (Greenhalgh *et al.* 1998, Grace *et al.* 2008, Choudhury *et al.* 2009).

Religious fatalistic attitudes were common (Greenhalgh *et al.* 1998, Griffiths *et al.* 2005, Grace *et al.* 2008) and included comments such as 'whatever happens is because of God's will' (Greenhalgh *et al.* 1998). However, there was some evidence to suggest that such views were predominantly held by first-generation Bangladeshis (Greenhalgh *et al.* 1998, Grace *et al.* 2008, Choudhury *et al.* 2009).

Religious events such as Ramadan also affected service utilisation. During this time, patients were less likely to attend outpatient clinics and less willing to have their blood tests taken (Chowdhury *et al.* 2003) or have their dietary needs met in hospital settings (Merrell *et al.* 2005). Similarly, Griffiths *et al.* (2005) report that social and spiritual barriers prevented attendance at their intervention. Some studies utilised religious leaders in their work to address religious misconceptions held by participants. Chowdhury *et al.* (2003) utilised religious leaders to reiterate the need to abstain from fasting for vulnerable groups such as those with erratic blood glucose control and pregnant women. Grace *et al.* (2008) reported how religious scholars disapproved of religious fatalism and attributed this to misinterpretations of Islamic teachings. Choudhury *et al.* (2009) appointed a religious leader to be the peer educator in their programme (for the purposes of trust and credibility from within the community).

Access and outcomes

Diabetes knowledge

The majority of study participants appreciated and wanted more healthcare information to improve their knowledge and the self-management of their conditions (Greenhalgh *et al.* 1998, 2005, Merrell *et al.* 2005, Grace *et al.* 2008, Choudhury *et al.* 2009). These ranged from understanding the onset of symptoms (Greenhalgh *et al.* 1998) to managing their conditions (Chowdhury *et al.* 2003, Rhodes *et al.* 2003, Greenhalgh *et al.* 2005, Choudhury *et al.* 2009). However, with the exception of one study, which reported adequate levels of knowledge regarding diabetes (Grace *et al.* 2008), most of the remaining studies indicated poor levels of knowledge regarding diabetes symptoms (Greenhalgh *et al.* 1998, 2005, Rhodes *et al.* 2003, Choudhury *et al.* 2009), diabetes prevention (Greenhalgh *et al.* 1998, Choudhury *et al.* 2009) and self-management (Greenhalgh *et al.* 1998, 2005, Rhodes *et al.* 2003, Griffiths *et al.* 2005, Choudhury *et al.* 2009).

Preferred sources of information

In some instances, healthcare professionals were seen as important and reliable sources of information (Greenhalgh *et al.* 1998, 2005, Merrell *et al.* 2005). On other occasions, there were mixed emotions on the quality and type of information provided by healthcare professionals which led to patient dissatisfaction (Rhodes *et al.* 2003, Choudhury *et al.* 2009). Some patients reluctantly accepted what they perceived as poor quality care in relation to information about self-management and the availability of services (Rhodes *et al.* 2003, Merrell *et al.* 2005, Choudhury *et al.* 2009). In other instances, healthcare professionals were seen as knowledgeable

and authoritative professionals whose advice should always be followed (Greenhalgh *et al.* 1998). The majority of studies highlighted how Bangladeshis had a greater preference and higher utilisation of informal networks including friends, family and resources in the community in accessing information (Greenhalgh *et al.* 1998, Rhodes *et al.* 2003, Merrell *et al.* 2005, Grace *et al.* 2008, Choudhury *et al.* 2009). The reasons for this were not elaborated on, apart from one study which largely attributed high reliance on informal networks to communication barriers (Rhodes *et al.* 2003).

Access and equity

Use of children as informal interpreters

One study reported on the use of formal interpreters and dissatisfaction with their use (Rhodes *et al.* 2003). Occasionally reception staff were called upon to interpret consultations, and in the one instance an official interpreter was provided, the interpreter did not speak the same language and this resulted in a lack of confidence in the healthcare system (Rhodes *et al.* 2003). The majority of studies reported how children were utilised as informal interpreters to overcome language and communication barriers (Greenhalgh *et al.* 1998, Rhodes *et al.* 2003, Merrell *et al.* 2005, Grace *et al.* 2008, Choudhury *et al.* 2009). Children were also occasionally responsible for wider support such as financial assistance, transport and translation (Merrell *et al.* 2005). Whilst some studies did not provide adequate descriptions of children interpreters (Greenhalgh *et al.* 1998, Grace *et al.* 2008, Choudhury *et al.* 2009), others referred to them as school-aged children (Rhodes *et al.* 2003, Merrell *et al.* 2005) and university-aged children (Rhodes *et al.* 2003). Parents were often mindful, reluctant and felt guilty about the undue burden placed on children but felt that there were no alternatives (Rhodes *et al.* 2003, Merrell *et al.* 2005, Choudhury *et al.* 2009). One study reported the views of a child carer who reported that she sacrificed her education to care for her relative (Merrell *et al.* 2005).

Disadvantages faced by women

The literature revealed that women, especially the first generation, were more socially isolated and at risk of receiving poorer care when compared with Bangladeshi men (Rhodes *et al.* 2003, Greenhalgh *et al.* 2005, Merrell *et al.* 2005, Grace *et al.* 2008). Women were less likely to be proficient in English with poorer communication skills than their male counterparts (Rhodes *et al.* 2003, Greenhalgh *et al.* 2005, Merrell *et al.* 2005, Grace *et al.* 2008). They were also less likely to be able to use public transport and independently access services such as exercise provision, hospital appointments and GP

appointments (Rhodes *et al.* 2003, Greenhalgh *et al.* 2005, Grace *et al.* 2008). Consequently, they were often reliant on wider family members to act as interpreters and chaperones (Rhodes *et al.* 2003, Greenhalgh *et al.* 2005, Merrell *et al.* 2005). They were more likely to have caring duties (Merrell *et al.* 2005), to stay at home, and have a higher burden of societal duties such as childcare and housework and meeting the wider demands of social norms such as remaining home which affected their ability to have equal access to healthcare compared with Bangladeshi men (Greenhalgh *et al.* 1998, Rhodes *et al.* 2003, Merrell *et al.* 2005, Grace *et al.* 2008).

Equitable access to information sources

Information in written form was not always provided (Rhodes *et al.* 2003) or appropriate even when printed in standard Bengali (Greenhalgh *et al.* 1998) as most patients could not read (Greenhalgh *et al.* 1998, 2005, Merrell *et al.* 2005, Grace *et al.* 2008). Patients and carers who could not read by themselves often relied on children to translate written information for them (Merrell *et al.* 2005, Grace *et al.* 2008). Information in alternative formats (video) were provided to the participants in the RCT and one further participant in a qualitative study (Rhodes *et al.* 2003), but their views on this format were not reported. One study reports how the majority of participants had not heard of any support services available to help them including through community channels (Merrell *et al.* 2005). Participants in other studies were unaware that particular services were available or existed (Rhodes *et al.* 2003, Merrell *et al.* 2005, Choudhury *et al.* 2009). Nonetheless, generally, both patients and healthcare professionals felt that the patient's information needs were not being met because of personal characteristics of language and literacy and the lack of cultural knowledge on the part of healthcare professionals (Greenhalgh *et al.* 1998, 2005, Rhodes *et al.* 2003, Merrell *et al.* 2005, Grace *et al.* 2008, Choudhury *et al.* 2009).

Discussion

The present review highlights some important experiences and preferences (including barriers and facilitators) in relation to accessing information and services by the Bangladeshi population. Various factors affected this population's access to healthcare information and services from availability, utilisation, outcomes and in relation to the equitable provision of services. It is likely that barriers in one domain of access such as the availability of information services (or lack of) had an effect on other domains of access such as utilisation, outcomes and equity. Consequently the design and delivery of healthcare services must consider all aspects of access simultaneously to ensure equitable access.

One of the major recurring themes was the poor levels of literacy and communication difficulties which appear to have compounded the effects of poor access for this community. The poor availability of linguistically competent services is likely to have limited the ability of patients to understand healthcare information, communicate effectively with healthcare professionals and have limited knowledge of wider healthcare services that are available. This may have led to a greater reliance and mobilisation of personal resources such as drawing on family and friends and wider community networks for information, advice and support. These findings are consistent with a previous review under the broader remit of disadvantaged groups which included South Asian minorities (Dixon-Woods *et al.* 2005), and the present review supports this assertion specifically for the Bangladeshi community. However, although language and literacy barriers can be overcome through family, friends and community networks, the exchange of advice and information may not be accurate and there are dangers of undue burden, pressure and breach of privacy, which have been well documented (Cohen *et al.* 1999, Rhodes & Nocon 2003, Gerrish *et al.* 2004). Children were frequently reported to act as interpreters during healthcare appointments; however, it is not within the scope of this review to discuss the advantages and disadvantages of using formal and informal interpreters. The studies provided little information on the nature of children as interpreters such as their gender, age and occupation which may explain why particular informal interpreters were often chosen or preferred. Similarly, studies contained both low literate and illiterate patients and carers, most likely with varying degrees of literacy and communication skills. Consequently, the findings may only be generalisable to a broad spectrum of low literate Bangladeshi patients. Nonetheless, despite the acknowledgement of language and communication barriers for many years (Hawthorne 1994, Gerrish *et al.* 2004, Dixon-Woods *et al.* 2005), the findings of this review suggest that the problems associated with this important domain of access remain to be addressed. Short of deploying more Bengali/Sylheti speaking doctors, nurses and other healthcare professionals nationally or ensuring that English is made compulsory for all citizens accessing healthcare services, it is clear that an intermediary position that is both acceptable to the patients and cost-effective for the NHS is adopted. Although the evidence on how language and literacy issues can be best overcome for the Bangladeshi population is scarce, there is some evidence to suggest that link workers/support workers may be effective in conveying key health information (Curtis *et al.* 2003, Raghavan *et al.* 2009). Work with other minority groups have suggested for similar approaches in order to minimise the language and cultural disparities

that exist (Khanchandani & Gillam 1999, Lawton *et al.* 2006a). However, with no nationally set criteria for staff training and in the absence of long-term evaluations of such schemes (Lawton *et al.* 2006a), their feasibility and effectiveness remain largely unknown and merit further research.

In addition to communication difficulties, the utilisation of services also appeared to be influenced by strong cultural and religious beliefs. The issue of 'religious fatalism' was present in the review and resonates with previous work in diabetes for Pakistani and Indian populations (Lawton *et al.* 2006a,b, Ludwig *et al.* 2011) and for the Bangladeshi population in relation to maternal health (Noor & Rousham 2007), heart disease (Netto *et al.* 2007) and healthcare delivery (Abbott & Riga 2007). Nonetheless, the present review does highlight the potential for community organisations and religious scholars in promoting self-care behaviours for patients with diabetes. Similarly, others have suggested for the potential involvement of community/religious organisations in health promotion and service delivery for the Bangladeshi population (Abbott & Riga 2007, Netto *et al.* 2007) and other populations (Dessio *et al.* 2004, Yu 2010). However, to date there has been little debate regarding the appropriateness of such specialised services (Jabbour & Fouad 2004) and there is little evidence of successful implementation, impact and feasibility which all merit further research.

It is important to note that whilst one study reported adequate levels of knowledge amongst the community (Grace *et al.* 2008), the majority reported poor and dangerously low levels of diabetes-related knowledge. The findings of improved knowledge may be due to repeated exposure of diabetes interventions in the same geographical area. Of the eight diabetes studies conducted with this population in the United Kingdom, this was the fifth study undertaken in the East End of London (Grace *et al.* 2008). The poor levels of knowledge amongst the remaining papers (Greenhalgh *et al.* 1998, 2005, Rhodes *et al.* 2003, Griffiths *et al.* 2005, Choudhury *et al.* 2009) could be partially explained by poor access to appropriate information sources and poor communication between Bangladeshis and healthcare professionals. However, given that some participants utilised family interpreters and some had access to Bengali speaking doctors, it is probable that external factors other than that of communication affected patient understanding and subsequent knowledge levels. Indeed, some studies highlighted a preference towards a participatory learning style which involved blood glucose testing for example (Chowdhury *et al.* 2003, Greenhalgh *et al.* 2005, Choudhury *et al.* 2009). It is not within the remit of this paper to discuss adult learning styles for low literate populations; however, it has been suggested that the simple exchange of didactic information may not be the most effective

method for the acquisition of knowledge for this population (Greenhalgh *et al.* 2005).

Our findings also alluded to the presence of psychological distress in the Bangladeshi community (particularly amongst women who seemed to be more socially isolated than men). Poor awareness of services, poor knowledge of symptoms and poor access to mental health services have previously been illustrated for this population in the United Kingdom (Parvin *et al.* 2004). More recently, a study conducted in rural Bangladesh reports over 30% of women with diabetes to have symptoms of major depression with a higher proportion of women being affected than men (Asghar *et al.* 2007). Whilst the influence of psychological well-being to patients living with type 2 diabetes has long been recognised (Greenhalgh 1997, Ismail *et al.* 2004, DH 2008a), access to psychological services for the Bangladeshi population in this review was uncommon. The reasons for this were not explored; however, there is a further need to identify the reasons for such poor service utilisation for this aspect of their health.

Conclusion

It appears that the Bangladeshi community continue to experience poor access in relation to diabetes. This review identifies various findings and gaps in our knowledge which may help towards improving access to diabetes healthcare information and services for the Bangladeshi community. However, given the dearth of evidence because of the limited number of papers retrieved in this review, the diversity of their aims and their moderate quality, these findings need to be interpreted with caution. It is clear that further research (both qualitative and quantitative) are required on the various domains of access to determine the most fruitful approaches towards ensuring the equitable and appropriate delivery of healthcare information and services. Unless attempts are made to improve the current situation, it is likely that the Bangladeshi population will continue to receive variable standards of care.

Strength and weaknesses

One of the strengths of this review was that all the studies were conducted in reasonably homogenous Bangladeshi populations in the United Kingdom, thereby removing confounding factors associated with different healthcare systems. Publication bias was addressed by removing multiple publications pertaining to the same study and by searching through a wide range of sources. The scoping review methodology provided an iterative and flexible strategy to incorporate relevant articles, and this was particularly useful, given the scarcity of

evidence for the Bangladeshi population. Furthermore, the four thematic components of access (Gulliford *et al.* 2002) provided this review with a robust framework for data extraction and analysis. We were flexible in our interpretation of the framework and this enabled us to categorise emerging themes that overlapped, accurately and objectively.

Weaknesses include the failure of the majority of papers to provide detailed information on access issues, participant characteristics such as assessed literacy levels and characteristics of children interpreters, the limited number of studies retrieved and on occasions, the small sample size of studies. Additionally, the inability to assess the quality of one paper as well as data extraction and analysis being conducted by one researcher owing to time constraints are weaknesses of this review.

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Conflict of interest

None declared.

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