

**PREVENTION OF DIABETES IN BANGLADESHIS IN EAST LONDON:
EXPERIENCES AND VIEWS OF YOUNG PEOPLE**

Running Title: Diabetes prevention in young Bangladeshis

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ABSTRACT

Aims: Type 2 diabetes is common amongst Bangladeshis, and prevention strategies are needed. Little is known about the views of younger people concerning diabetes and its risk factors, and views on how to prevent the condition. We aimed to explore knowledge, experience and views on prevention of diabetes amongst young Bangladeshis in Tower Hamlets.

Methods: Semi-structured interviews and focus groups involving 40 young Bangladeshis.

Results: Participants were aware of diabetes being a major health issue. They were aware of the link between diabetes and poor diet. There was some knowledge about genetic risks and complications. Many participants had a relative with diabetes, and some had been involved in their care (eg. translating). Some had negative experiences, such as parents suffering from poor control, complications or hypoglycaemia. Knowledge of diabetes was predominantly gleaned from school. Many felt that older generations were at higher risk because of their lack of exercise and reliance on traditional diets. Participants recognised that the Westernised diets also increased risk. They felt they had greater knowledge and were more physically active than their elders. Views on prevention of diabetes were strong, including increasing diabetes awareness in schools, rewards for healthier lifestyles, reducing costs of exercise, reducing advertising of poorly nutritious foods and tackling the proliferation of fast food outlets.

Conclusions: Young Bangladeshi people showed good knowledge of diabetes and its causes and have cogent ideas on its prevention. The views of young people should be considered when developing diabetes prevention strategies at a local and national level.

INTRODUCTION

Bangladeshis form a significant minority ethnic population in the UK, and have a high prevalence of Type 2 DM [1]. Whilst genetic factors may be important, cultural and environmental factors are likely to be influential. Only 26% of Bangladeshis men and 11% of Bangladeshi women meet the recommended levels of physical activity [2-4]. Dietary intake of fat, salt and carbohydrates is also high [5]. Whilst immigration results in a change in environment, cultural norms may not change, and may cause conflict in a new environment [6]. Views surrounding food intake are one of the most resistant to change in migrant populations [7]. Previous work suggests that the Bangladeshi community sees diabetes and degradation of health as a part of ageing rather than the result of poor lifestyle [8]. Indeed, the cultural history of the Bangladeshi diaspora is characterised by the predominance of infectious disease, as opposed to non-communicable disease, which may lead to the view that illness stems from sources outside of the body [5]. Culture may not only affect willingness to participate in prevention, but may also obscure the understanding of diabetes [5].

Qualitative study has shown that cultural attitudes to lifestyle can be difficult to overcome. Amongst adult South Asians, knowledge of the impact of poor lifestyle on health appears to be good, but significant barriers to improving lifestyle are apparent [9]. Physical activity is acknowledged as a strategy in preventing diabetes, but what constitutes physical activity varies considerably. In a study in East London, prayer was cited as sufficient to sustain health, and discordance views were seen between people who believed exercise was socially and religiously unacceptable and those that thought it was supported by the religious teaching [9]. Furthermore, whilst apparent motivation to prevent diabetes was high, barriers to prevention included social expectation of “special” foods, the wife’s role as provider of tasty meals versus guardian of family health, and the desire to exercise versus fear of social disapproval.

Little is known about the cultural and situational risk factors for Type 2 DM in younger South Asians. The aim of this study was to develop an understanding of the knowledge and experience of younger Bangladeshis in diabetes and its prevention.

METHODS

Data was collected during 2014 from youth groups in Tower Hamlets. A total of 40 young people participated. All participants were between the ages of 13 and 25 and resided within Tower Hamlets.

Data was collected through six interviews and six focus groups of various sizes. Sessions were semi-structured, exploring the areas of awareness of the condition and its causes, personal experience of diabetes, how they acquired information about diabetes, their insight into why diabetes is such a problem and what could be done about it.

Focus group sizes ranged from two to eight individuals. Information from interviews was recorded and transcribed. Data was analysed by thematic content analysis using the constant comparative method to isolate recurring themes in participant responses to each topic [10].

RESULTS

40 people participated in the interviews, 32 (80%) of whom were male. Thematic analysis showed the following themes emerging.

Awareness of the condition

The majority of participants had a basic understanding on what diabetes was and, although not all information was accurate, all participants had heard of diabetes and most connected it with healthy living. Diabetes was most often described as having to do with “sugar levels” and “eating too much sugar”. Whilst fats and other unhealthy foods were described, the primary emphasis was on sugar. School biology classes were where they gained the basic knowledge of diabetes. They were quick to stress the limits to what schools taught them about diabetes, suggesting that schools focused more on the biological aspects of diabetes, rather than providing information on prevention or raising awareness on diabetes. Healthy living, however, was more commonly addressed in schools, with some emphasis on care with diet and increasing exercise.

Participants also reported that they gained information about diabetes from friends or family. Few commented that information was available from their general practitioner (with the exception of information gained from accompanying a family member with diabetes to a GP appointment) and most seemed to believe that little information was available to the general population.

“...I know that diabetes deals with sugar and eating a lot of sugar although sometimes people can be born with it. Yes, I definitely think it’s a problem especially among Asians who aren’t aware about how much sugar they eat. There is sugar in everything.”

"I think it is a type of cancer and has to do with low blood sugar..... I know it is caused by your diet and having a bad diet."

"I know it's caused by eating too much sugar and people being overweight".

"Diabetes is caused from having too much sugar in your blood..."

"Diabetes us a disease caused by having too much sugar. I know that there are two different types and that it can be caused by leading an unhealthy lifestyle. It affects your sugar and cholesterol levels."

"I know that diabetes is related to sugar levels and I think that it can kill people..... I think it is caused by having too much sugar."

"I have a basic idea of what diabetes is. I think diabetes is caused by having too much sugar in your food; sugar, salt and oil. It can also be affected by your genes."

"We also talk about it in science class. There is plenty of information on the Internet if people want to look at it but not enough in schools or from doctors."

Understanding of the causes of diabetes

Genetics was mentioned as a risk factor along with obesity and old age. The majority believed that diabetes was a problem amongst Bangladeshis, highlighting the dietary problems within the community and the availability of cheap fast food.

"I think that diabetes is a problem in the community because young people don't care what they eat so long it fills them up. At a chicken shop, you get lots of food for very little money."

"Fast food is convenient and cheap and gives you quick energy. Buying unhealthy food saves you the trouble having to ask your mother or sister to cook something healthy."

"I know that diabetes is common in the Bangladeshi community. I know it is caused by unhealthy diet such as too much sugar and high cholesterol foods."

"It's definitely a problem in our community. Sugar is sold everywhere and everyone goes to buy sweets after school. Everything has sugar....."

"We have so much access to sugar and it's so cheap. Kids eat so much candy after school. Everyone goes to buy sweets after school."

"We have Healthy Eating Day and workshops in school that teach healthy choices. If you participate and are willing to change, you won't be at risk. I don't think I'm at risk."

"I know that diabetes is a big problem in the Bangladeshi population. There are a bunch of high risk factors like genetics, weight, and smoking....."

Experience of diabetes within the family

35 participants (87.5%) had a relative or friend with diabetes. Many participants knew a close family relative with the condition, and were aware of its hereditary nature, and higher risk in people of Bangladeshi origin. Relatives suffering from diabetes were also a source of information. Many said they had to translate for their relatives when visiting doctors.

"I know about diabetes because of my dad. I always go with him to the GP so I can translate for him. I also got a general idea from science class in school, but I don't think that there are many programs for young people on the subject."

"My dad had diabetes, he is getting older. He doesn't have much energy anymore and he gets ill once or twice every month. My mum has diabetes and the GP told her she has to completely change her diet. She is on a bunch of medication and deals with high cholesterol."

"My gran and aunt have diabetes and I learned about diabetes from family members."

"My dad has diabetes and he has to watch his eating habits as well as get injections. It has affected his life because he has many medical problems; sometime he faints on the spot....."

“My dad has diabetes and I know he has issues with his insulin. My mum has diabetes and I know she can’t regulate her blood sugar.....”

Generational Differences

Most participants believed that there was a difference between their parents’ generation and their own regarding understanding of diabetes risk factors. Most believed they were more educated on healthy living than their elders. Participants also believed they exercised more regularly than their parents. Some participants discussed the necessity of having variation in diet, often in connection to the older generation eating only traditional meals of curry and rice, which was viewed negatively. Many participants believed that having too much curry and rice was bad for health. Some suggested a connection between the older generation and inactive lifestyles. For example many reported that their parents just “stayed in the house”. The majority of participants believed that diabetes levels would increase in the future. Some highlighted the unhealthy eating habits of the younger population as possibly worse than the older generation.

“It is a bigger problem in the older generation because they don’t exercise enough and they eat lots of oily food, not healthy food. I think our generation is more aware of the importance of food and exercise.....”

“It was definitely a problem in the older generation because they weren’t as well educated as us...”

“Yes, I think there is a difference between my generation and my parent’s generation. They don’t ever vary their diet. They think the rice and curry is best.....”

“...It is also a problem that parents don’t know the correct foods to feed their children so children eat unhealthy food from a very young age. I think that the older generation exercises much less than the younger generation.”

“I think that there is a difference between the older generation and the younger generation. The older generation had no support, information, or help from the local services. They were unaware of healthy lifestyle and ate a very unhealthy cultural diet of only curry and rice.”

“Our generation eats much more junk food than our parents, but we also exercise more than they do.”

"You are at risk for diabetes if you eat a lot of sweets and unhealthy foods. I definitely think that it is worse in the younger generation."

Barriers to healthy diet and lifestyle

Sweets and fried chicken shops were commonly mentioned in regard to unhealthy eating habits. Participants expressed that the need to access cheap, filling, tasty food led to unhealthy food choices. Participants reported that healthy food was expensive and difficult to access, was also more time consuming to make, did not taste as good and was not filling. Although most agreed that diabetes was a problem within the community, young people were unlikely to prioritise healthy eating over availability and cost. Availability of healthy living activities such as gym facilities and exercise classes was discussed. Many reported that they were less likely to go to the gym because it was expensive.

"... it's more of a problem in younger kids because sweets are cheap, easy to get, and they taste good. We can't help ourselves. It's like the new tobacco."

"I think it's a problem because people don't really care about it. It's not taken as seriously as cancer since we know people who have it and people don't really die. No one realises it's life threatening."

"People my age eat a lot of fried chicken because it is quick and cheap. Healthy food takes too long to prepare. I also think that it is a problem because no one really advertises for healthy foods. All advertisements are for unhealthy stuff."

"The problem is that there aren't very many options to eat healthy. Many of my friends eat badly because unhealthy food is quick, cheap, and fills you up."

"I think that in the younger population, we have more of an opportunity to avoid diabetes, but it is also harder to avoid because bad food is everywhere and easy to get, and because we have technology which makes us lazy..."

"Healthy food is expensive and young people are more likely to spend money on new technology or going out rather than healthy food. Gym memberships are so expensive as well. Healthy diet just isn't one of the concerns of young people. We are more interested in our social lives."

Suggestions for prevention

Some participants suggested that initiatives for affordable gym membership would enable people to be more inclined to stay healthy and physically fit. Another suggestion was that information on diabetes was more readily available in schools, through school visits and resources for teaching on diabetes. It was suggested that healthy food needed to be made cheap and tasty to combat the cheap and inexpensive (unhealthy) option of chicken and chips. Economic issues, which prevent young people from healthy living, were highlighted. Some participants felt that there was not an awareness issue, but people needed more help to make the right choices. Advertising of unhealthy foods was highlighted as important to curtail. Improving the quality of school meals was also suggested as important to reduce unhealthy diets.

"I don't think there is enough information about diabetes in the community."

"I think it needs to be introduced in schools. People have to listen to what is taught in schools because we are required to be there. There isn't enough awareness surrounding the subject of diabetes."

"At school they teach us about healthy choices and I feel I have a good idea about health. I think that it is a problem because children are lazy and won't get it. For there to be a change, we need posters in the schools and constant encouragement every month so we won't forget about it."

".....Education should start with the parents to properly teach their kids what to eat. There need to be clubs available that let young people go to the gym for free. In the schools, PE isn't really PE. You don't really get educated or learn how to exercise, you just play games....."

"It would help if there weren't so many advertisements on kids TV. Maybe they should be banned and only advertise healthy foods. After school fitness activities would help."

"It would make a difference to give workshops but don't just give talks. Give examples and make sure people know about the really bad effects of diabetes. People aren't motivated to change."

"There are so many advertisements for unhealthy foods on kids' shows. There should be a program on kids' television that talks about diabetes and shows way to eat healthy. They should make something that tastes like sugar but is not bad for you....."

"Maybe target the chicken shops because there are so many."

"I think that the best way to make our generation more aware and willing to change is to make sure that people are forced to learn about diabetes in schools."

"It would be effective to show the extreme effects diabetes can have. If you tell real life stories, people are more likely to listen....."

"It would also be beneficial to give people a reward. If they are rewarded for their good habits, they are more likely to make healthy choices."

".....It would be effective to show a video of the effects of diabetes so that people know the terrible things that can happen. It would be beneficial to have free or low cost check-ups available in markets."

"Nothing is taught in the schools and so people don't know the risks or effects. There definitely isn't enough information out there. This is the first time someone has talked to me about diabetes."

"To make a positive change I think that parents should be educated on what to feed their kids. If you focus on schools and colleges and present the information in a fun way, people might listen. If your friend is doing it, you are more likely to be interested."

"People know about bad foods, but not the extent of how bad they are. No one realizes that sugar is literally in everything. Another way to address healthy eating would be to focus on making school dinners healthy."

"Unhealthy food is served in schools and this is something that should be much more regulated. I think parents would even be willing to volunteer to cook healthy food for schools. This would create more jobs and encourage healthy eating."

DISCUSSION

South Asians living in the UK are at 3-6 times risk for developing Type 2 DM compared to White Europeans [11,12]. In Tower Hamlets, around 18% of South Asians are considered to be at high risk for developing diabetes [13]. In recent years, metabolic syndrome and Type 2 DM is becoming more common amongst South Asian children and adolescents [14-16], and ethnic differences in Type 2 DM precursors are apparent in UK children in the first decade of life [17]. For the same BMI, South Asians have a higher body fat percentage, abdominal obesity, intramyocellular lipid and liver fat content in comparison to White Europeans, which contributes to a higher risk of developing insulin resistance, at lesser degrees of adiposity [18-20].

The aim of our study was to explore the understanding of younger Bangladeshi people on diabetes and its risk factors. The results suggest that many young people have heard of diabetes, are aware of its link with poor diet and physical inactivity, and many of them have cogent views on how the problem could be tackled. Excess intake of sugar and unhealthy fried foods (in particular fried chicken) was widely considered the dominant cause of diabetes, although many younger people felt that the traditional diet of curry and rice in their elders was responsible for their high incidence of diabetes.

Many participants had experience of diabetes amongst close family relatives. Some of these experiences were around accessing health care, for example acting as a translator for a relative with diabetes. Others described family members' negative experience of diabetes, such as collapsing, developing complications or taking medications and insulin. Most young people had some information on diabetes from their school curriculum, although this had perhaps only focussed on biological models of diabetes, rather than the health effects of the condition.

An interesting finding was the perceived differences seen between young people and their parents or other elders in their knowledge of risk, and in eating behaviours. Many young people viewed the traditional diet rather negatively, but recognised that aspects to a Western diet of high sugar and fat intake was equally negative. Many felt they had a better knowledge of diabetes and healthy lifestyles than their elders, but recognised that there were many barriers to improving their lifestyle, particularly with regards to diet and physical activity.

Suggestions to help reduce risk of diabetes amongst Bangladeshis were both perceptive and recognised the importance of external factors on diabetes risk. The participants recognised that economic factors are paramount in helping people to lead healthier lives. They understood that unhealthy food was cheap and

readily available, and that healthy options had to be made both more readily available and more affordable. An interesting suggestion was the use of “incentives” or “rewards” to help people lead healthier lives. This area is controversial, but has been tried successfully in smoking cessation initiatives in pregnancy [21]. A more sustained and longer term system of incentives might be more difficult in the area of nutrition, but perhaps more disincentives to eat unhealthy food (through taxation) might be feasible, coupled with subsidies for healthier options [22]. A number of participants mentioned the ready access to fried chicken shops, especially ones near to schools. One participant described these like “selling drugs to schoolchildren”. The local authority is best placed to try and reduce the numbers of such outlets, especially near to schools. School lunches were also mentioned as needing work, as was access to low cost exercise facilities and better education on methods of keeping physically active.

Whilst it was encouraging to hear that many young people had gleaned some knowledge of diabetes from school, it was clear that they felt that this area of education could be enhanced. Teaching more about the potential complications of diabetes was suggested as a possibility, in order to raise awareness amongst young people of the potentially devastating effects of the condition. In addition, participants felt that hands on workshops to help with knowledge around healthy eating would be helpful.

In our review of the literature, we were unable to find many studies examining views and experiences of Type 2 DM in young people. One previous report of younger family members of Hispanic patients with diabetes, showed a number of influences on intergenerational legacy of diabetes including food preparation within the family, participation of physical activity within the family, expectations for the future and understandings of diabetes being shaped by family members, well-intentioned actions have negative consequences, and children and parents supporting each other's diabetes care [23]. Our research is the first to our knowledge to report on knowledge, experience and views of young Bangladeshis on the topic of diabetes, and its prevention. In our survey, we found that young people have good knowledge of diabetes, are interested in knowing more, and have helpful suggestions in how to help prevent diabetes. It is important that such views are heard when working towards improving diabetes prevention strategies in high risk communities.

NOVELTY STATEMENT

- This is the first study to ask young Bangladeshis about their knowledge and personal experiences of type 2 DM, and their views on prevention.
- Most were aware of diabetes, risk factors and complications.
- Many had relatives with the condition, and learned about the condition from school.
- Many recognised the strong link between poor diet, exercise and diabetes, and expressed a number of barriers to improving these.
- Views on prevention included restricting advertising and selling of poorly nutritious foods, improving access to low cost exercise, and raising awareness of the condition in schools.

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