

Healthy eating in UK minority ethnic households: Influences and way forward

Key messages

1. Health inequalities experienced by minority ethnic populations in the UK will, in part, be affected by dietary differences. However, conclusive evidence on eating practices is limited due to small sample sizes, difficulties in collecting information and contradictory findings.
2. Food practices of minority ethnic individuals are not homogenous and vary not only by ethnicity, but also by generation, geographic origin, age and religion. There is a need to recognise the factors which sit alongside ethnicity, e.g. social, gender and economic factors, which influence awareness of healthy eating, food choice, timing of meals and portion sizes.
3. There are a range of influences on food practices, including household dynamics, community and socio-cultural norms and the issue of affordability and accessibility of food which are embedded in the wider context of poverty and deprivation.
4. Policies and practices have narrowly focussed on improving healthy eating by improving knowledge and skills about food categories and cooking. There is a need to design culturally sensitive interventions that build on positive food practices and adopt a family and community centred approach with a focus on early years. Further, the availability, cost, quality and convenience of healthy food are crucial.

Introduction

Many minority ethnic groups living in the UK experience health inequalities in the form of higher rates of mortality and morbidity as compared to the white population (Liu, *et al.*, 2015; Liu *et al.*, 2012; Ghouri, 2005; Nazroo, 2003; Bhopal, 2002). It has been argued that health inequalities experienced by minority ethnic populations will in part be affected by food differences (Ludwig, Cox and Ellahi, 2011; Ludvigsen and Scott, 2009). However, there is limited evidence on the food choices and eating practices of minority ethnic populations due to small sample sizes, difficulties in collecting information and small scale contradictory findings. It is therefore not a surprise that policies and practices informed by limited and contradictory evidence have not been able to tackle the issues of healthy diet and obesity. This paper draws on the findings from academic and grey literature, alongside the outcomes from a qualitative study conducted in three cities in the North of England which explored the influences on food choices among minority ethnic populations. Where possible, UK literature has been used. Because South Asian minorities are the most populous in the UK and there is a larger existing literature on their dietary practices, it has been easier to provide examples from these communities. UK based examples from other minority ethnic populations have been used where possible, but in some instances the findings from other Western countries have been used instead. It must not be assumed that minority ethnic groups have homogenous food practices.

The Food Standards Agency's description of a healthy diet refers to '*The Balance of Good Health*' and encourages consumption of a range of food from the following food groups: (1) bread, cereals and potatoes; (2) fruit and vegetables; (3) milk and dairy; (4) meat, fish and alternatives. There is a fifth

group of foods, containing fat and sugar, which are not considered essential, but are seen as a way to make food more palatable and to increase choice to a diet (Food Standards Agency, 2001, p.3).

Healthy eating among minority ethnic populations in the UK: what is known?

Research into the diets of UK minority ethnic populations is limited in the respect that larger data sets exploring the diets of these populations are not available; for example the National Diet and Nutrition Survey has not been able to provide information analysed by ethnicity (Public Health England and the Food Standards Agency, 2014). Other studies also highlight the difficulties in collecting health information from minority ethnic groups due to reasons such as a lack of engagement and language barriers (McEwen *et al.*, 2009). The pockets of research which do exist present a mixed, and in some instances contradictory, picture about the diets of UK minority ethnic populations. Some research reveals a wide range of diets across minority ethnic groups, but within particular groups finds homogeneous elements (Leung and Stanner, 2011); for example, Ludwig, Cox and Ellahi (2011) suggest that the diets of the South Asian UK population are typically high in saturated fats, and sometimes low in fruit, vegetables and fibre. In contrast, according to Leung and Stanner (2011), the Health Survey for England reported that all minority ethnic groups, across both genders and all age groups, ate more fruit and vegetables on a daily basis as compared to the rest of the population. Intake of calories, fat, sugar and salt were also found to be lower in UK minority ethnic groups as compared to the white population. Within specific minority ethnic groups living in the UK there are examples of further diversification, such as Gilbert and Khokhar's (2008) review which reported that Pakistanis and Bangladeshis were more likely to eat an English style breakfast of breads and cereals, whereas Hindus and Sikhs were more likely to opt for *chapattis* and *parathas*.

Evidence suggests a variation in food practices based not just on ethnicity, but also due to migration and generational differences. Minority ethnic groups' acculturation to the diet of their country of residence has been shown to correlate with a decline in health status (Gilbert and Khokhar, 2008), as does the introduction of a new diet typified by an increase in fats and sugars. For example, second generation South Asian women reported eating fewer traditional meals and meals away from home than first generation South Asian women. Scott and Rajan's (2000) findings concur with this, as they report that Caribbean people born in the UK were more likely to eat a takeaway than Caribbean people born outside of the UK. Children are also more likely to acculturate their food practices than their parents. Evidence suggests a greater speed of change was found amongst younger people in the consumption of food items categorised as '*accessory foods*' such as snacks (Gilbert and Khokhar, 2008, p. 203). The authors suggest the dietary habits of older minority people are likely to be slower to change because they are more segregated from the white UK population. Overall, second-generation minority ethnic populations showed a higher risk of having poor dietary behaviours akin to those observed in the white UK population (Smith, Kelly and Nazroo, 2011).

Further, the literature identifies ethnic differences in the timing of meals, eating practices and what was considered a main meal. For example, minority ethnic groups were found to prioritise having a family meal, a finding also supported by Rawlins *et al.* (2012) whose study found Indian families took regular family meals and believed this style of eating offered a positive advantage in respect to being able to monitor the eating habits of children. Breakfast was described by some as an 'English meal' and it was unusual for South Asian food to be eaten (Ludwig, Cox and Ellahi, 2011, p. 1845). A qualitative study of the Somali population in a particular part of North London found that this

group's pattern of eating differed to the general population as they reported eating their main meal of the day at lunchtime or in the early afternoon (McEwen *et al.*, 2009).

The above evidence paints a complex and mixed picture with regard to healthy eating among minority ethnic populations. It suggests that the dietary habits of minority ethnic populations are not homogeneous and may differ by ethnicity, geographic origin, class, religious and cultural beliefs and migration (Lucas, Murray and Kinra, 2013; Ludwig, Cox and Ellahi, 2011; Leung and Stanner, 2011). Some key influences behind food choices of individual households are examined below.

What are the main influences on the dietary habits of the minority ethnic populations?

There is a robust relationship between lower socio-economic status and less healthy food intake (Ludvigsen and Scott, 2009; Wilkinson and Marmot, 2003). Minority ethnic populations living in the UK are more likely to experience poverty than the white British population (Joseph Rowntree Foundation, 2014). Poverty has a direct impact, in terms of a reduced capacity to afford healthy food, and an indirect impact, such as being poorly paid and having to work unsociable hours, which can make it difficult to prioritise having regular healthy meals. For example, one study found that a large number of respondents working in the catering industry reported eating irregular meals and eating at unsociable hours (Mullen *et al.*, 2006). Against this general picture of disadvantage, there are some specific influences on the diets of minority ethnic populations that will now be examined.

1. Household dynamics: gender and generation

Gender dynamics are reflected in the way food-related decisions such as food choices, portion sizes, meal timings and serving orders are made in the household (Counihan, 1999). Women hold the primary responsibility for cooking, though this does not mean that they independently make decisions around food practices. Instead, their decisions are usually a result of negotiations with men and older and younger generations living in the same household for a temporary or extended period of time (Ludwig, Cox and Ellahi, 2011; Jamal, 1998). Further, women are expected to ensure traditional food practices are maintained (Ludwig, Cox and Ellahi, 2011). This may lead to a woman feeling conflicted between the desire to provide healthy meals for their family and the expected social norms which require them to cook particular foods using particular methods and to offer generous portions. Lawrence *et al.*, (2007) found that young Pakistani and Bangladeshi women continue to value traditional cooking practices and cooking from scratch, describing it as 'natural' (p. 314); at the same time, they acknowledged the time-consuming nature of such activities and the potential time conflict for those who work. Ludwig, Cox and Ellahi's (2011) study reported that men influence both the choice of food and the method of preparation. However, expectations around men's involvement in cooking seem to be changing (Rawlins *et al.*, 2012), albeit demarcated gender roles are still present and a man providing a meal was considered a treat or a break from the norm.

Jamal's (1998) study, which focused on the British Pakistani population in Bradford, uncovered important generational differences in food consumption. For example the older generation, especially men, preferred to eat traditional food most of the time, whilst the younger generation did not want to eat traditional food every day. Though there is limited research on the influence of minority ethnic children on household food practices, they appear to play an important role. For example, the DiEt and Active Living (DEAL) study (Rawlins *et al.*, 2012) found that children assisted

their parents if they had low English literacy levels, by reading food labels to check if a food was suitable for religious reasons. In the school environment, the type of food eaten by a child was found to be a sign of them either fitting in or standing out to their peers. For example, Ludvigsen and Scott, (2009) found that children who brought something other than a sandwich in their lunchbox, e.g. cold, home cooked food, were ridiculed by other children, and was reported as a food practice undertaken by many minority ethnic groups. Younger people from minority ethnic groups were also found to see the consumption of English foods as a reflection of their independence (Gilbert and Khokhar, 2008). In younger children, whilst parents were found to be the primary agents in making decisions about their children's health; the evidence also suggested that children were able to play a role with respect to whether they engaged with healthy practices (Rawlins *et al.*, 2013).

2. Community: cultural identity and social value of food

There can be several factors at the community level which may influence the food choices of some minority ethnic populations. Besides the social importance of cooking and the need to maintain traditional food practices, a shared understanding of what is healthy and desirable can influence food choice. For example McEwen *et al.*, (2009) explored the dietary attitudes and behaviours of a Somali population and found that nearly all participants reported eating less than two portions of fruit and vegetables per day and that this population consumed large amounts of rice, pasta and red meats. The rationale underpinning these dietary decisions was that the consumption of fruit and vegetables was associated with poverty; the consumption of meat was associated with wealth and special occasions. Similarly, a small qualitative study (Scott and Rajan, 2000) with the Caribbean community in South London found that the types of vegetables consumed by this group in the UK were the same as those eaten in the Caribbean. Vegetables seen to be typical of those eaten by the general UK population were less likely to be consumed.

Cultural, religious and spiritual identity can influence food choice. Places of worship were found to fulfil a community role and provided opportunity for activities such as socialising and eating together (Ludwig, Cox and Ellahi, 2011). The same study also reported that Hindu temples and Sikh Gurdwaras sometimes provided free meals. Places of worship were also reported to enable a freer discussion of traditional food practices and for conversations to be situated within a wider family and culturally specific context (Maynard *et al.*, 2009). Findings from Ludwig, Cox and Ellahi (2011) showed that being a Muslim provided the strongest identity for participants and that this levied a strong steer on food habits. The Koran was not seen as a source of food information, except for information on *halal* and *haram*. Conversely, there are examples where the influence of religion on food practices are mitigated by circumstance; e.g. Lawrence *et al.*'s (2007) study which included a small cohort of Somali, female children and which found that the cohort did not adhere to religious dietary restrictions when they were away from their families.

Receiving food in the form of a gift was found to be a reflection of cultural norms and not taking part in the practice of giving or receiving food risked offence and alienation from the community. The same concern was also applied to portion size (Lucas, Murray and Kinra, 2013). The consumption of larger portion sizes has been investigated by Sharma *et al.*, (2002) who found that the UK African-Caribbean community eats larger portions of individual food items, e.g. potatoes, as well as larger meals, e.g. homemade soups, as compared to the white UK population. These dietary habits are

significant as they evidence cultural differences in food consumption and show the need for healthy eating guidelines that take into account the amount of food consumed, as well as what is consumed.

3. Market: affordability, availability and convenience

Healthy eating is possible when healthy food is available, affordable and easily accessible (Story *et al.*, 2008; Wilkinson and Marmot, 2003; Maffia, 2007). Furthermore, promotional strategies, variety and quality can influence purchasing decisions. Poverty is one of the key drivers of food and drink consumption and typically, cheaper foods are more energy dense and have relatively low levels of vitamins and minerals (Butland *et al.*, 2007). The situation with regard to ethnic foods is even more complex as they may be more expensive and may or may not be of high nutritional value but are considered desirable (Gilbert and Khokhar, 2008). For example, one study showed that traditional foods were eaten more readily over the weekend by one minority ethnic group; the justification for this was that these foods are more expensive and make you feel fuller (Scott and Rajan, 2000). In contrast, another study suggested that some ethnic groups would prioritise the purchase of traditional foods even if the cost was high as compared to their income and even if the food was less fresh than in their home country (Gilbert and Khokhar, 2008; Maffia, 2007).

Previous studies have suggested links between access to supermarkets and healthy eating (Story *et al.*, 2008). One US study suggested that African-Americans' consumption of fruits and vegetables increased threefold when they had increased access to supermarkets (Morland *et al.*, 2002). Similarly, UK studies indicate that the size and type of food shop, combined with the ease of access, may vary depending on socio-economic group (Rawlins *et al.*, 2013). Those from lower socio-economic groups reported a preference for budget supermarkets, local shops and purchasing a smaller number of items per visit. The ease of obtaining minority ethnic specific foods varied; for example, South Asian foods were reportedly widely available, whereas Black African and Caribbean foods were felt harder to obtain from mainstream shops but, when purchased at a market, were believed to be cheaper and fresher. A lack of English language skills which makes it difficult to read food labels has been identified as a barrier to purchasing appropriate food (Maffia, 2007).

4. State: policy and interventions

The policies and practices promoting healthy eating have narrowly focussed on improving knowledge about food categories and providing cooking skills courses rather than understanding the complex underlying factors associated with what food is purchased and consumed. For example, the previous UK government's strategy which aimed to reduce obesity levels stated, '*individuals and families will have a good understanding of the impact of diet on their health, and will be able to make informed choices about the food they consume, with extra support and guidance for those who need help*' (Cross-Government Obesity Unit, Department of Health and Department of Children, Schools and Families, 2008, Executive summary p. xiii). Such policy stances are then translated into practices such as healthy cook and eat sessions. These sessions receive mixed responses, with only some participants finding them helpful. In one study (Ludwig, Cox and Ellahi, 2011), British Pakistani women reported that their food and diet was already healthy, whereas the health professionals believed the diets of these women contained too much oil and not enough fruit and vegetables. In contrast, participants in McEwen *et al.*'s (2009) study expressed a desire for health education and practical support, with healthy cooking classes being repeatedly mentioned.

The section as follows will illustrate the aforementioned four influences by presenting empirical findings from a qualitative study undertaken in the North of England.

Exploring the links between minority ethnic women's access to resources and healthy eating in Pakistani and Gujarati households in the UK

This case study is based on 35 (23 Pakistani and 12 Gujarati) in-depth interviews with mothers from a range of socio-economic and occupational categories and with one or more dependent children. The research aimed to investigate the relationship between women's access to resources and healthy eating. The study revealed a range of intra-household and extra-household influences on eating practices.

Gender and generational dynamics

Household food practices were influenced by various factors, such as the composition of the household (nuclear or extended), the woman's employment status, the age of children, and the migration history of each member of the household. Many women reported very diverse food choices in their household, especially when they lived with their in-laws and school aged children and those women who were married to men with a different migration history, such as a British woman married to first-generation Pakistani man. Some women addressed the issue of diverse food preferences by being creative in carving out several different meals from the basic preparations (e.g. *roti* and *haandi* for their husband, *roti* and dry chicken as a wrap for their children and dry chicken and salad for themselves) to allow themselves and their children to eat healthily. Several women reported being faced with negative consequences if they challenged the food habits of their family members directly and prepared food that was not liked. Although women with an independent income reported an enhanced capacity to influence food choice, for example through topping up household groceries with their preferred food items, the women who acknowledged and accommodated gender rules around cooking and tastes were more successful in achieving their alternative food choices with the least conflict. As one woman explained:

My father in law he eats, but my mother in law she doesn't eat anything that she is not used to...so for her, I obviously have to make something separate, anything like vegetables, lentils, chicken, meat or anything like that. I strive to keep everyone happy. As I said, you need to adapt carefully...

Socio-cultural norms of food

Household food practices were found to be situated within the wider context of the socio-cultural and religious norms around cooking and eating. These norms included the desire to maintain traditional food practices, the social function of eating and the social and religious value of food, which may be different to the nutritional value. Some women discussed the generational differences in social eating and said that whilst their parents always had people around, they themselves did this less often. However, it was still a consideration for several women in the study; one woman explained her reasons for cooking what she considered an efficient but less healthy option:

When you cook a meal you want it lasts [sic] for loads of people, not for one person, when you make a chicken wrap you have to make about 20 chicken wraps there for 20 people. How long is that going to be to just make them, forget eating! ...And salad it ain't going to last you two days [unlike curry], and you have to cut it all fresh. That's the food problem...it's all about society, community, saving money, because you can't save money and have healthy food!

Affordability and accessibility

Budget appeared to be a limiting factor for several women in the study as they struggled to provide healthy food on a low budget. Though some women said they would not compromise on food, their narratives contained details of making choices between expensive food and alternative cheaper brands, recipes and stores. Many women's accounts contained the various ways in which they shopped and cooked to eat well on their budget. Cooking from scratch and making a big meal and then splitting it into several smaller meals was reported by several women. One woman described how she planned lunches for her children:

“Let’s say maybe an egg sandwich, maybe a tuna sandwich, because sometimes if you buy a tuna sandwich made up it’s going to cost you £2.50 and for £2.50 you can buy three tins of tuna and you can make loads of sandwiches.”

Experiences of interventions

The majority of women were aware of current healthy eating discourses, particularly with regard to fruit and vegetables and cutting down on sugars and fatty foods. However, a balanced diet (including carbohydrates and protein) was rarely mentioned without prompting. Only a small number of women had attended healthy eating courses. Of those who had, the majority did not find them helpful and some found them patronising, feeling that their eating habits were being stereotyped. As one woman said:

.. So I said that we don’t eat parathas every day... Like you eat Weetabix so we use wheat to make roti which is healthy. We use yogurt and salad...Some people make food really spicy, so maybe that’s why they think that what we eat it’s [sic] not healthy.

A small minority who felt they had learnt something were unable to implement changes for fear of having to cook multiple, separate meals, or having to cook twice due to family members not feeling full for long. Healthy eating was more easily achieved when men committed to eating healthily.

Way forward

Designing culturally sensitive interventions

There is a need to use existing community resources, links and leaders, as well as ensure any interventions are harmonious with cultural and religious practices (Netto *et al.*, 2010). It is crucial to ‘involve prominent members of communities and to respect religious and cultural sensitivities’ (Ghouri, 2005, p.200). Wallia *et al.* (2013) and Netto *et al.* (2010) identified the influence of culture over diet and the need to overcome and be sensitive to language barriers, particularly between healthcare providers and minority ethnic populations, if health interventions are to be successful.

Apnee Sehat: an example of a culturally sensitive initiative aimed at the South Asian community in a UK city. The project was developed in partnership with the community and included health and lifestyle changes. It aimed to promote behavioural change in a culturally sensitive manner. Objectives included raising awareness of the risks attached to lifestyle and diet. Working with a Sikh Gurudwara, the project involved 'health champions'. Community engagement, culturally sensitive health messages and an acceptable venue contributed to reported lifestyle changes at both individual and household level. Source: (Coe and Boardman, 2008); <http://www.apneesehat.net/>.

Recognising the diversity of eating practices

Minority ethnic groups are heterogeneous in ways such that interventions that are successful with some groups will be less so with others. The food habits of minority ethnic populations need to be considered in terms of specific ethnicity as well as the level of acculturation, age, access to traditional foods and religion. There is also a need to recognise other factors which influence food choice such as social, gender and economic factors (Lucas, Murray and Kinra, 2013).

Focussing on early years

The evidence suggests that healthy behaviours are learned in childhood and the teenage years and it is these which stick throughout the life course. With this in mind, the need to ensure children have a healthy diet to benefit them in their younger years, and later in their adult years is well recognised (Weichselbaum and Buttriss, 2014; Chief Medical Officer, 2013). However, there is little evidence that can help design interventions for minority ethnic households with children in the context of migration, culture and gender norms.

Building on positive food practices

Building on the positive food practices already in existence, for example reading the label for health information; complying with religious and cultural practices; the social value of cooking and eating; high intake of fruit and vegetables; and preferences for home cooked meals is crucial for the success of any interventions. There is a need to focus on healthy cooking practices through the development of amendments to traditional recipes, but which are still considered acceptable to the population.

Adapting a family and community centred approach

An individualistic approach to health and diet may not be appropriate for minority ethnic populations. A more family and community centred intervention may be more suitable for women and men to be able to translate their knowledge of healthy eating into implementation. Community based interventions may prove more effective with some groups. For example, in the African-American community, implementation of church-based, motivational interviewing has been shown to increase fruit and vegetable consumption (Resnicow *et al.*, 2001).

Making healthy food affordable and convenient

The promotion of affordable and convenient food is central to healthy food purchases. A higher quality and wider variety of ethnic foods with clear nutritional information will enable individuals from minority ethnic backgrounds to make informed choices.

Supporting behavioural change

Health professionals and educationalists require a better understanding of the needs of minority ethnic populations if they are to support them in making healthy choices. The acculturation of minority ethnic groups' diets means ongoing research is required to understand this aspect. Whilst interventions aimed at surface level may increase how receptive the target population are, and as an approach are valid in their own right, only interventions which have been adapted at a deeper level will result in behavioural change, e.g. those which recognise the cultural, social and psychological aspects which influence behavioural change (Netto *et al.*, 2010; Resnicow *et al.*, 1999). Further, the wider economic and environmental factors that affect health, but which are difficult to tackle through short-term health strategies, remain crucial to successful health promotion (Douglas 1996).

Finally, minority ethnic food practices should not be pathologised; instead gender and generational dynamics, community socio-cultural norms and issues of food affordability and accessibility all need to be understood and responded to in the wider context of migration, marginalisation and socio-economic deprivation.

Resources

1. South Asian Health Foundation - www.sahf.org.uk
2. British Nutrition Foundation - <https://www.nutrition.org.uk/publications/briefingpapers/ethnic-diets.html>
3. The eatwell plate: how to use it in promotional material - <https://www.gov.uk/government/publications/the-eatwell-plate-how-to-use-it-in-promotional-material/the-eatwell-plate-how-to-use-it-in-promotional-material>
4. NHS Healthy Eating - <http://www.nhs.uk/livewell/healthy-eating/Pages/Healthyeating.aspx>
5. Heart UK - https://heartuk.org.uk/files/uploads/Afro-caribbean_diet_cholesterol.pdf
6. British Heart Foundation - <https://www.bhf.org.uk/heart-health/preventing-heart-disease/your-ethnicity-and-heart-disease/your-ethnicity-and-heart-disease---african-caribbean>
7. Food Standards Agency - <http://www.food.gov.uk>

References

- Bhopal, R (2002) 'Epidemic of cardiovascular disease in South Asians: prevention must start in childhood', *British Medical Journal*, 324, 625.
- Butland, B, Jebb, S, Kopelman, P, McPherson, K, Thomas, S, Mardell, J and Parry, V (2007) *Foresight. Tackling obesity: future choices, Project report*, 2nd ed., Government Office for Science https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/287937/07-1184x-tackling-obesity-future-choices-report.pdf
- Coe, C and Boardman, S (2008) 'From temple to table: an innovative community health and lifestyle intervention aimed at a South Asian community', *Ethnicity and Inequalities in Health and Social Care*, 1, 2, pp.44-51.
- Counihan, C (1999) *The anthropology of food and body: Gender, meaning, and power*. London, Routledge.
- Chief Medical Officer (2013) *CMO's annual report 2012: Our children deserve better: CMO's summary as a web page*, Department of Health <https://www.gov.uk/government/publications/chief-medical-officers-annual-report-2012-our-children-deserve-better-prevention-pays/cmos-annual-report-2012-our-children-deserve-better-cmos-summary-as-a-web-page>
- Cross-Government Obesity Unit, Department of Health and Department of Children, Schools and Families (2008) *Healthy Weight, Healthy Lives: a cross-Government strategy for England*. <https://extranet.who.int/nutrition/gina/sites/default/files/GBR%202008%20Healthy%20Weight,%20Healthy%20Lives-%20A%20Cross-Government%20Strategy%20for%20England.pdf>
- Douglas, J (1996) 'Developing with Black and minority ethnic communities, health promotion strategies which address social inequalities', *Bywaters*, 1, pp.179-96.

Food Standards Agency (2001) *The balance of good health: Information for educators and communicators* <http://www.food.gov.uk/sites/default/files/multimedia/pdfs/bghbooklet.pdf>

Ghouri, N (2005) 'Health fair in a mosque: putting policy into practice', *Public Health*, 119, 3, pp.197-201.

Gilbert, PA and Khokhar, S (2008) 'Changing dietary habits of ethnic groups in Europe and implications for health', *Nutrition reviews*, 66, 4, pp.203-215.

Joseph Rowntree Foundation (2014). *Poverty rate by ethnicity*. <http://www.jrf.org.uk/data/poverty-rate-ethnicity>

Lawrence, JM, Devlin, E, Macaskill, S, Kelly, M, Chinouya, M, Raats, MM, Barton, KL, Wrieden, WL and Shepherd, R (2007) 'Factors that affect food choices made by girls and young women, from minority ethnic groups, living in the UK', *Journal of Human Nutrition and Dietetics: the Official Journal of the British Dietetic Association*, 20, 4, pp.311-319.

Leung, G and Stanner, S (2011) 'Diets of minority ethnic groups in the UK: Influence on chronic disease risk and implications for prevention', *Nutrition Bulletin*, 36, 2, pp.161-198.

Lucas, A, Murray, E and Kinra, S (2013) 'Health beliefs of UK South Asians related to lifestyle diseases: a review of qualitative literature', *Journal of Obesity*, Article ID: 827674 <http://dx.doi.org/10.1155/2013/827674>.

Ludvigsen, A and Scott, S (2009) 'Real kids don't eat quiche: What food means to children', *Food, Culture & Society*, 12, 4, pp.417-436.

Ludwig, AF, Cox, P and Ellahi, B (2011) 'Social and cultural construction of obesity among Pakistani Muslim women in North West England', *Public Health Nutrition*, 14, 10, pp.1842-1850.

Liu, J, Davidson, E, Bhopal, R, White, M, Johnson, M, Netto, G, Deverill, M and Sheikh, A (2012) 'Adapting health promotion interventions to meet the needs of ethnic minority groups: mixed-methods evidence synthesis', *Health Technology Assessment*, 16, 44, pp.1-469.

Liu, JJ, Davidson, E, Bhopal, R, White, M, Johnson, M, Netto, G and Sheikh, A (2015) 'Adapting health promotion interventions for ethnic minority groups: a qualitative study', *Health Promotion International*, doi:10.1093/heapro/dau105.

Maffia, C. (2007) 'Practice Report: Changes in the Eating Patterns of Asylum Seekers in Dispersal', *International Journal of Migration, Health and Social Care*, 3, 2, pp.51-55I.

Maynard, MJ, Baker, G, Rawlins, E, Anderson, A and Harding, S (2009) 'Developing obesity prevention interventions among minority ethnic children in schools and places of worship: The DEAL (DiEt and Active Living) study', *BMC Public Health*, 9, 480.

McEwen, A, Straus, L and Croker, H (2009) 'Dietary beliefs and behaviour of a UK Somali population', *Journal of Human Nutrition and Dietetics*, 22, 2, pp.116-121.

Morland, K, Wing, S and Diez Roux, A (2002) 'The contextual effect of the local food environment on residents' diets: The atherosclerosis risk in communities study', *American Journal of Public Health*, 92, 11, pp.1761-1768.

Mullen, K, Chauhan, R, Gardee, R and Macpherson, L (2006) 'Exploring issues related to oral health and attitudes to diet among second-generation ethnic groups', *Diversity in Health and Social Care*, 3, 2, pp.131-139.

Nazroo, JY (2003) 'The structuring of ethnic inequalities in health: economic position, racial discrimination, and racism', *American Journal of Public Health*, 93, 2, pp. 277-284.

Netto, G, Bhopal, R, Lederle, N, Khatoon, J and Jackson, A (2010) 'How can health promotion interventions be adapted for minority ethnic communities? Five principles for guiding the development of behavioural interventions', *Health Promotion International*, 25, 2, pp.248-257.

Public Health England and the Food Standards Agency (2014) *National diet and nutrition survey: Results from years 1,2,3 and 4 (combined) of the rolling programme 2008/2009 - 2011/2012*
<https://www.gov.uk/government/statistics/national-diet-and-nutrition-survey-results-from-years-1-to-4-combined-of-the-rolling-programme-for-2008-and-2009-to-2011-and-2012>

Rawlins, E, Baker, G, Maynard, M and Harding, S (2012) 'Perceptions of healthy eating and physical activity in an ethnically diverse sample of young children and their parents: The DEAL prevention of obesity study', *Journal of Human Nutrition and Dietetics*, 26, 2, pp.132-144.

Resnicow, K, Baranowski, T, Ahluwalia, JS and Braithwaite, RL (1999) 'Cultural sensitivity in public health: defined and demystified', *Ethnicity and Disease*, 9, 1, pp.10-21.

Resnicow, K, Jackson, A, Wang, T, De, AK, McCarty, F, Dudley, WN, Baranowski, T (2001) 'A motivational interviewing intervention to increase fruit and vegetable intake through Black churches: results of the Eat for Life trial', *American Journal of Public Health*, 91, 10, pp.1686-1693.

Scott, P and Rajan, L. (2000) 'Eating habits and reactions to dietary advice among two generations of Caribbean people: A South London study, part 1', *Practical Diabetes International*, 17, 6, pp.183-186.

Sharma, S, Cade, J, Landman, J and Cruickshank, K (2002) 'Assessing the diet of the British African-Caribbean population: frequency of consumption of foods and food portion sizes', *International Journal of Food Sciences and Nutrition*, 53, pp.439-444.

Smith, NR, Kelly, YJ and Nazroo, JY (2011) 'The effects of acculturation on obesity rates in ethnic minorities in England: evidence from the health survey for England', *European Journal of Public Health*, 22, 4, pp.508-513.

Story, M, Kaphingst, KM, Robinson-O'Brien, R, and Glanz, K (2008) 'Creating healthy food and eating environments: policy and environmental approaches', *Annual Review of Public Health*, 29, pp. 253-272.

Wallia, S, Bhopal, RS, Douglas, A, Bhopal, R, Sharma, A, Hutchison, A, Murray, G, Gill, J, Sattar, N, Lawton, J, Tuomilehto, J, McKnight, J, Forbes, J, Lean, M and Sheikh, A (2013) 'Culturally adapting the prevention of diabetes and obesity in South Asians (PODOSA) trial', *Health Promotion International*, 29, 4, pp.768-779.

Weichselbaum, E and Buttriss, JL (2014) 'Diet, nutrition and schoolchildren: An update', *Nutrition Bulletin*, 39, 1.

Wilkinson, RG, and Marmot, MG (2003) *Social determinants of health: the solid facts*. World Health Organization.

Acknowledgement

The qualitative study mentioned in this paper was funded by the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care for South Yorkshire (NIHR CLAHRC SY) a pilot which ended in 2013 and NIHR CLAHRC Yorkshire and Humber (est 2014). The views and opinions expressed are those of the authors, and not necessarily those of the NHS, the NIHR or the Department of Health.

Sheffield Hallam University

Healthy eating in UK minority ethnic households : influences and way forward

CHOWBEY, Punita <<http://orcid.org/0000-0001-8400-468X>> and HARROP, Deborah <<http://orcid.org/0000-0002-6528-4310>>

Available from the Sheffield Hallam University Research Archive (SHURA) at:

<http://shura.shu.ac.uk/12926/>

Copyright and re-use policy

Please visit <http://shura.shu.ac.uk/12926/> and <http://shura.shu.ac.uk/information.html> for further details about copyright and re-use permissions.