ABSTRACT

BACKGROUND

This review aims to investigate the impact of ethnicity and culture on vascular problems such as hypertension and ischaemic stroke in Afro-Caribbean people who have Type 2 diabetes. Diabetes affects 3.1 million people in the UK, with Type 2 diabetes accounting for 90% of cases. It has been shown that Afro-Caribbean people have an increased risk of developing Type 2 diabetes as compared to Caucasians, as well as associated elevated stroke and hypertension rates. With 600,000 Afro-Caribbean people currently living in the UK, this is an important issue for the NHS to consider.

METHOD

Critically appraise 7 articles using the Critical Appraisal Skills Programme (CASP). Consider main themes arising from the articles in the light of a wider body of academic literature.

RESULTS

The critical appraisal of the selected articles gave rise to three common themes: “hypertension and associated risk of stroke”, “physiological differences associated with ethnicity”, and “culture affects self-management”. Stroke, hypertension and diabetes were found to be more high risk in Afro-Caribbeans than Caucasians. Risk factors of stroke varied with ethnicity although an interesting finding was that cardiovascular disease was reduced in Afro-Caribbeans compared to Caucasians; this was associated with physiological differences. Diet, experience of family and friends, use of natural remedies and religious faith were also found to affect self-management.

CONCLUSIONS

Ethnicity and culture of Afro-Caribbeans was shown to have significant association with impaired self-management of Type 2 diabetes. It may be useful to introduce nursing models of diabetes care which allow culturally-appropriate empowerment.
factors: For example, it has found that risk factors associated with Caucasians are more likely to be smoking, obesity and cardiovascular disease, compared to ACs, who are more likely to have hypertension (Abbotts et al, 2004; Antoine et al, 2004; Benjamin et al, 2014), supporting the findings of Baskar et al (2006), Chaturvedi et al (2006), Coleman et al (2014).

From the evidence seen, hypertension is more common in ACs, which links with the findings that ischaemic stroke is more common in ACs. It is also clear that lifestyle choices which appear to be linked with ethnicity have a major impact on the risk of stroke.

4.2.2 PHYSIOLOGICAL DIFFERENCES ASSOCIATED WITH ETHNICITY

Ethnicity-related physiological differences were suggested by several of the studies reviewed (Ashworth et al, 2011; Coleman et al, 2014; Chaturvedi et al, 2006). It was found that coronary heart disease is reduced in ACs compared to Caucasians (Bunker et al, 2006) (Baskar et al, 2006; Chaturvedi et al, 2006; Coleman et al, 2014). This has been explored in several studies; It has been found that ACs have metabolic profiles of lower triglycerides, lower LD and higher HD lipoprotein cholesterol and lower plasma fibrinogen which have also been attributed to the reduced risk of coronary heart disease (Abbotts et al, 2004; Anderson et al, 2001; Brunner et al, 1999). These lipid profiles have also been connected to insulin resistance, providing a possible reason for the increased rate of Type 2 diabetes in ACs (Chavez et al, 2008; Petersen et al, 2007).

4.2.3 CULTURE AFFECTS SELF-MANAGEMENT

It has been shown that cultural beliefs affect adaptation and coping strategies and may affect response to standard treatment and perception of outcomes (Halm et al, 2004). This can be due to traditional use of alternative treatments and beliefs about what causes disease (Smith, 2012). McDowell and Moss (2005) found that the use of non-prescribed, herbal and folk medicines was commonplace in Caribbean people and was rooted in cultural beliefs about diabetes and treatment. It is agreed that knowledge of the disease and treatment is affected by memory and experiences of friends and family (Daniulaityte, 2004, cf. Avis et al, 2007).

First-generation AC migrants in the UK eat more traditional diets with high proportions of vegetables and fruit, positively associated with reduced coronary heart disease (Campbell et al, 2010). However, traditional foods and cooking methods also include a high salt content which may contribute to the increased incidence of hypertension (Gilbert and Khokhar, 2008; Lancaster, 2009), supporting the findings of Ashworth et al (2011) and Avis et al (2007). Abbotts et al (2004) warn that second-
CHAPTER 5: CONCLUSION

This review has investigated the impact that ethnicity and culture has on the experience of Type 2 Diabetes in Afro-Caribbean people, with particular focus on the risks of hypertension and ischaemic stroke. This was done by critical analysis of seven articles using CASP which helped identify three themes: ‘hypertension and associated risk of ischaemic stroke’, ‘physiological differences associated with ethnicity’ and ‘culture affects self-management’. Key findings of the reviewed literature were that stroke, hypertension and diabetes are more common in ACs than Caucasian people in the UK. Also, it was found that hypertension and vascular problems are significant problems in diabetics.

An interesting finding was that the major risk factors of stroke varied with ethnicity. This had implications on recommendations made for changes to practice, that nurses should be culturally-aware when providing information for patients about self-management. Suggested physiological differences associated with ethnicity were that ACs may have more favourable lipid profiles compared to Caucasians; this wasn’t a finding I had anticipated when first researching this topic; it would be useful for more studies to be conducted around it. Culture-specific traits such as diet, experience of family and friends, use of natural remedies and religious faith were also found to affect self-management. Recommendations were made for practice, education, management and research based on these findings, including the use of culturally-appropriate empowerment nursing models for diabetic patients.
conducted in the USA. However, the results of this study were corroborated by other studies and were considered applicable to review.

11. Do the results of this study fit with other available evidence?
Looking at the wider context of all seven articles used in the review, they address different areas of the topic being considered. Avis et al (2007) consider the impact of culture on the health beliefs of African-Caribbean people and how this affects self-management of Type 2 Diabetes. Ashworth et al (2011) explore how ethnicity affects blood pressure control in patients with Type 2 Diabetes and how this affects vascular problems. Baskar et al (2006) consider the prevalence of hypertension and vascular complications in three ethnic groups with Diabetes. Chaturvedi et al (2006) explore the effect of ethnicity on stroke and coronary heart disease linked with Diabetes. Coleman et al (2014) examine the relationship between ethnicity and vascular outcomes. Hajat et al (2004) focus specifically on ethnic risk factors for ischaemic stroke. Hu et al (2007) consider the relationship between Type 1 and Type 2 Diabetes and the risk of stroke in women. The studies are well-designed and analysed. They all use quantitative data apart from the qualitative study conducted by Avis et al (2007) which consists of interviews. It is useful to have information from the patients’ perspectives to use alongside the quantitative articles.

12. What are the implications for research/practice?
Ashworth et al (2011). **Research:** Studies needed to see if the results showing the mortality risk of stroke associated with Type 2 diabetes is replicated in other African-Caribbean communities. Need to establish reasons behind hypertension variance with ethnicity. Chaturvedi et al (2006). **Research:** Further studies needed to corroborate results such as exploring ethnicity-associated differences in regulating circulation in the brain with different levels of glucose tolerance.
Hu et al (2007). **Practice:** Need to make changes to practice to increase control and management of risk factors of stroke in diabetic patients, especially hypertension. Prevent rather than treat the problems and anticipate problems associated with ethnicity while still considering the patients individually. Emphasis placed on control of blood sugar and hypertension.

QUALITITATIVE STUDY

1. Are research aims clearly stated?
Yes: focused questions and aims. Population to be studied identified and predictions made about the outcomes of the studies using academic references.

2. Is qualitative methodology appropriate? 3. Was the research design appropriate?
Face-to-face interviews with 16 ACs with Type 2 diabetes to consider the impact of culture on the health beliefs of AC people and how this affects self-management of the disease. This was a useful study to use for this review as it was specifically based on the subgroup being studied. It was also
10. How valuable is the research?

Implications for practice: Use findings of the study to develop better diabetes services for African-Caribbean people in the UK. Treat all patients individually but understand the influence that culture may have. Improve education, local community groups and increase cultural awareness in nurses and healthcare professionals. Implications for research: Further studies needed on how to change practice to meet the needs of African-Caribbean patients and also how to improve self-management of diabetes in that group.

CASE CONTROL STUDY


1. Are research aims clearly stated?
Yes: focused questions and aims. Population to be studied identified and predictions made about the outcomes of the studies using academic references.

2. Was an appropriate method used?
It was useful to have a comparison group in order to see the significance of the data collected.

3. Were the cases recruited in an acceptable way? 4. Were the controls recruited in an acceptable way?
664 diabetic patients from the South London Stroke Register aged 44-75 and 716 control cases from a cross-sectional survey were selected.

5. Was the exposure accurately measured to minimise bias?

6. a) What confounding factors have the authors accounted for? b) Have the authors taken of the potential confounding factors in the design and/or in their analysis?
Limitations: Low response to the initial questionnaire for the control group (45%). It may be that the estimation of risk factor incidence could have been overestimated if people with more health problems were more likely to respond to requests for examinations. However, the results of the control group were compared with similar studies which produced comparable results.

7. What are the results of this study?
Main result: Risk factors of stroke should be targeted according to a patient’s ethnic group. Also considers risks such as smoking and alcohol intake in the light of ethnic background. E.g. in Afro-Caribbeans, it may be more important to control blood pressure and diabetes than stopping smoking and reducing alcohol intake. Black Caribbeans twice as likely to have diabetes and hypertension than Caucasians. Implications: Practice: Develop prevention programs which take the patient’s ethnicity and culture into account. Research: More studies needed to build up a more comprehensive picture of the various risk factors for ischaemic stroke and the effect of ethnicity.


