

Research papers

Glaucoma awareness and perceptions of risk among African–Caribbeans in Birmingham, UK

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ABSTRACT

Among black people, primary open-angle glaucoma is a major cause of irreversible blindness that is avoidable with early detection and treatment. This paper presents an account of a qualitative investigation, based on a phenomenological approach, into glaucoma awareness based on semi-structured interviews and focus groups with 48 African–Caribbean participants who were not receiving treatment from a hospital eye service. Data were analysed using manual and computerised methods to identify six themes: ‘knowledge of glaucoma’, ‘glaucoma risk perception and heuristics’, ‘images of blindness’, ‘health accounts’, ‘glaucoma risk perception’ and protection motivation theory and ‘cultural context and individual differences’. Findings showed that while participants held positive attitudes to health promotion in general, these did not incorporate eye health. Factors such as family

histories, where available, were very important in helping individuals to understand that glaucoma might affect them, and in what ways this might happen. Attitudes to blindness tended to reflect the notion of the blind person as a victim. The idea of taking action to prevent this happening hinged upon participants’ perceptions of the credibility of both the source and the nature of the information they had received about glaucoma. It is anticipated that this study will help practitioners to understand the health beliefs of African–Caribbean patients with this condition and to assist in recruitment to further research on glaucoma pathogenesis and clinical outcomes in the African–Caribbean eye.

Keywords: African–Caribbean, glaucoma, risk perception, UK

Introduction

Adult-onset primary open-angle glaucoma (POAG) is a potentially blinding disease, the burden of which is sufficiently great in African–Caribbeans to justify increased attention from researchers, health professionals

and policy makers (Cappuccio and Khadra, 2001). People of African–Caribbean descent are up to eight times more likely to develop POAG, which appears 10–15 years earlier than in other ethnic groups

(Hattenhauer *et al*, 1998; Chen, 2003; Racette *et al*, 2003). Application of molecular genetic techniques to glaucoma suggests that different genes from those implicated in other groups are responsible for the severe form found in black people (Wiggs, 2000). However:

... while our increasingly sophisticated technology can facilitate diagnosis, patient and community benefit does not follow if no assessment occurs. To encourage regular review, the community needs to know about glaucoma and the benefits of early detection. Without awareness, this seems unlikely. (Landers *et al*, 2002)

Professionals in health and social care are concerned that lack of awareness of risk, low levels of referral, and under-utilisation of the primary eye-care service mean that POAG could remain a major cause of irreversible blindness in black people (Cross *et al*, 2004; Morjaria-Keval and Johnson, 2005). Patients with glaucomatous visual loss at the start of treatment are significantly more likely to become blind, and African-Caribbean patients in the UK are 4.5 times more likely to present late than their white counterparts (Wormald *et al*, 1994; Fraser *et al*, 1999). Investigations into underlying reasons, such as disease awareness and barriers to access, have drawn predominantly on informed, clinic-based populations, but there is a need to explore perceptions of those at risk, and potentially less informed, outside the hospital eye service.

Research into glaucoma and ethnicity: The Birmingham (ReGAE) Project

In most patients with POAG the disease is asymptomatic until it has reached an advanced stage. However, blindness is avoidable with early detection and treatment. To detect early glaucomatous disease it is necessary to case-find asymptomatic patients in the target population. The Birmingham ReGAE (Research into Glaucoma and Ethnicity) Project is a UK-based programme of glaucoma research aimed at contributing to unravelling the complexity of African-Caribbean glaucoma. It comprises several phases addressing issues related to POAG pathogenesis, clinical outcomes, socio-cultural influences on glaucoma-related health behaviours, and utilisation of the primary eye-care services by African-Caribbean people (Cross *et al*, 2004) The study reported here explores issues related to glaucoma awareness and perceptions of risk, and is part of the qualitative arm of the ReGAE Project. The study was conducted in the area served by Heart of Birmingham Teaching Primary Care Trust, which includes four inner-city wards of Birmingham. Ethical

approval was given by the Local Research Ethics Committee based at City Hospital NHS Trust, Dudley Road, Birmingham, UK.

Methods

The study adopted a phenomenological approach, which attempts to capture the qualitative diversity of people's experiences by reconstructing their subjective viewpoints (Flick, 1998; Gibbs, 2002). The underlying assumption is that the interviewee has a complex store of explicit and implicit knowledge about an issue under study.

Data were collected using semi-structured interviews. This method was selected as it facilitates the expression of knowledge that is both explicit and implicit in a way that renders it accessible to interpretation. An interview guide, which included construction of a family tree to indicate near relatives who had vision-related conditions, was developed. Throughout the interviews the generic term 'glaucoma' was used in preference to POAG. In lay usage little distinction is made between the terms 'optometrist' and 'optician'. Both terms were used interchangeably, to describe primary care practitioners used by participants. The key prompts used in the individual interviews and focus groups are shown in Box 1.

Twenty-eight individual interviews were recorded with permission from the participants. Likewise, two focus groups were also recorded to triangulate perspectives on some emergent issues. Focus Group 1 elicited an all-male perspective from six men between 34 and 43 years. Focus Group 2 comprised 13 members of a local diabetic support group aged 49–79 years, who all had ongoing health issues. All interviews lasted approximately one hour. A university-based researcher of African-Caribbean background (VC) conducted all the interviews. They occurred at various times and locations determined by what was most convenient and acceptable for participants.

In early interviews the order in which issues were raised was determined by each participant's responses and development of rapport. Ongoing analysis added breadth and depth to the guide, and helped determine an ordered list of issues to be covered with subsequent participants. For the most part this was followed. However, interviews remained flexible and responsive enough to allow individuals to recount experiences and express viewpoints in their own way.

Data analysis

All interviews were fully transcribed and coded using both manual and computer-aided methods (NVivo[©])

Box 1 Key prompts used in interviews and focus groups

- Can we start by talking a bit about your general approach to health issues, for example do you consider yourself a healthy person? (Probe: what are signs of good health, how is it maintained?)
- If you have a problem associated with your eyes where do you go for advice or help?
- What sorts of problems might take you to the optician?
- How would you describe your experiences at the optician? (Probe: what type of optician, tests, information given?)
- What are your feelings about having regular eye tests? (Probe: awareness of charges, exemptions)
- Did you know anything about glaucoma before taking part in this interview?
- Could you explain how you came by this information? (Probe: family history)
- What are your feelings about the risk of developing glaucoma, for example would you ever consider that you might develop the condition yourself? (Probe: reasons)
- What do you think would be some effective ways to help people find out about glaucoma and encourage them to go for an eye test? (Probe: impact on younger people, community resources)
- Is there anything else you would like to ask me about glaucoma?
- Would you mind telling me how you felt about the interview?

Additional prompts for focus groups

- Some people (interviewees) have suggested that African–Caribbeans can be reluctant to discuss blindness in the family, is that your experience? (Probe: importance of family history of glaucoma)
- It seems less common to see black people who are blind or visually impaired using mobility aids such as guide dogs or long canes to go about their daily business, do you think that's so? (Probe: help-seeking, community support)
- Have you ever thought about what it must be like to be blind or visually impaired; what effects does it have on people's lives? (Probe: mechanism of glaucoma blindness)

software program for qualitative data management). Interpretation and inferences were validated through discussion of emerging concepts within the research team; checking back with some participants; independent analysis of randomly selected transcripts; and discussion with expert advisors and other members of the African–Caribbean community not directly involved in the study.

Recruitment and characteristics of participants

Potential participants were accessed through key informants who acted as channels of introduction to individuals who fitted the study criteria. Twelve local organisations were approached, of which ten responded. Other independent individuals also brokered introductions. Presentations were given at churches, colleges or group meetings, followed by invitations to take part.

Forty-eight people (female = 24, male = 24) were interviewed. The age range was 60 years: mean = 48, median = 42, interquartile range = 35. Participants identified their place of birth and described their ethnicity, using the list of descriptors included in the 2001 UK census (Figures 1 and 2). The majority of those born in the UK traced their roots back to Jamaica but St Kitts, Nevis and Barbados were also

represented. All the participants in this study identified with the terms 'black' and 'African–Caribbean', and used them interchangeably during interviews. Recruitment continued until it was felt that no further, relevant insights were forthcoming and key themes had become clear.

Results

Six main themes emerged from the data analysis:

- knowledge of glaucoma
- glaucoma risk perception and heuristics
- images of blindness
- health accounts
- glaucoma risk perception and protection motivation theory
- cultural context and individual differences.

Each theme is presented and discussed below. Extracts from the interview data are annotated with the interview number, sex and age, for example 20:M38. Extracts from the focus groups are prefixed by G (G2:M61). The interviewer's words are italicised and clarifications appear in square brackets. Speech data are coded as follows: — indicates a pause; *italic* indicates speaker's emphasis; (...) indicates interrupted speech; ... indicates words or phrases from the transcript omitted.

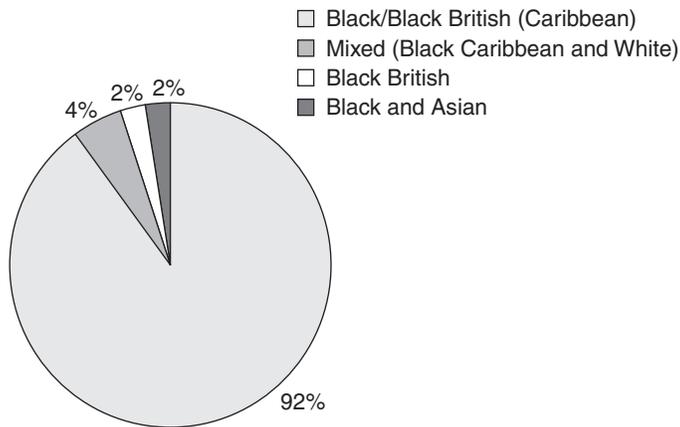


Figure 1 Participants' self-determined ethnicity ($n = 48$)

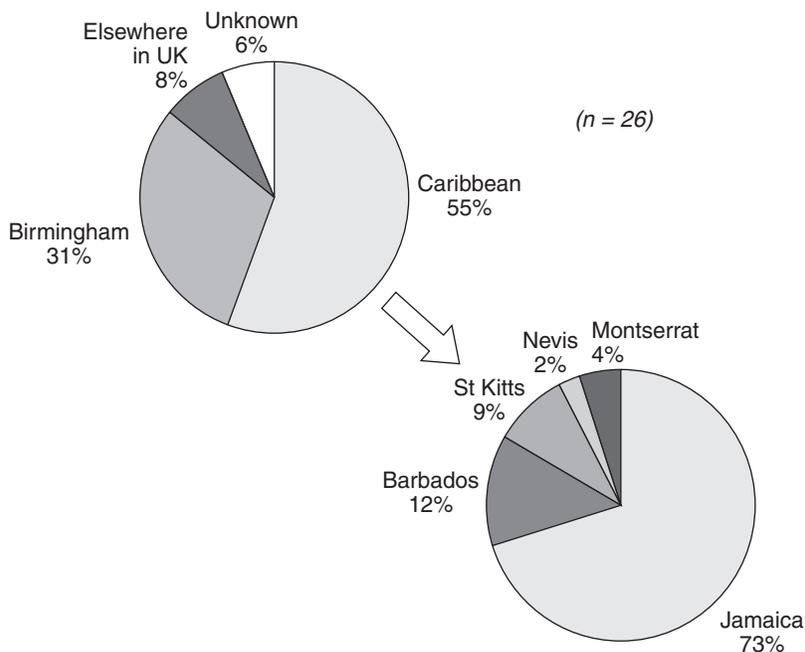


Figure 2 Participants' place of birth ($n = 48$)

Knowledge of glaucoma

Sixty-seven percent ($n = 32$) said they had heard of glaucoma before taking part. Knowledge derived mostly from family experience. That this source might be limited was apparent when participants attempted to map relatives with vision-related conditions onto a family tree. Several remembered relatives who were blind, but were not sure why and had not asked. Since 79% had actually undergone an eye examination in adult life, it was notable that fewer than one-quarter of those who had heard about glaucoma had been informed by an optometrist. Descriptions of glaucoma varied; for example, 'weakness in the eye', 'blurry vision', 'something to do with skin over the eyes'. The most accurate descriptions, such as 'a build-up of pressure due to lack of drainage', came from participants who

had heard of the condition from an optometrist. Family experience was not necessarily an indication of accurate knowledge. For example:

'... my father was diagnosed with the glaucoma ... The ins and outs of glaucoma I don't know, but I know it's to do with your eyes. But that is the only thing ... you need to wear glasses, that's the long and short of it as far as I know.'
(G1:M41)

Glaucoma risk perception and heuristics

Risk perception may be subject to bias because of representativeness; that is, assessing degree of risk against an assumed norm or stereotype and availability, and

the ease with which similar instances come to mind. Perception of glaucoma as a ‘blinding condition of elderly people’ led to an optimistic bias about the likelihood of developing POAG. For example:

‘We look at it as if we’re gonna get it when we’re older. We look at it as if [grandmother] has that because she’s old.’ (26:F36)

‘... their reaction is something like, “isn’t that something that old people get, nah!” ... a lot of the people that I relate to at the gym ... obviously a lot of them are black, but they just looked upon it, “no, no, that’s for old people”.’ (27:M45)

Redefining the condition as an initially asymptomatic, potentially blinding condition of 30–50-year-old African–Caribbeans meant participants had to re-orientate their thinking around a different norm and consider that ‘What one should not think about may be more vital than how well one knows what one does think about’ (Johnson, 2004).

The covert nature and inherited risk factors of POAG accentuated the important role of family networks in promoting eye health and preventing blindness. Some participants suggested that cultural influences might militate against this because:

‘People really didn’t talk about health issues.’ (4:F51)

‘I think folks tend not to ask too many questions.’ (19:F42)

‘Like me, a lot of families going backwards ... In the West Indies a lot of us were never told certain things about families. They were ill and you didn’t know what was wrong.’ (G2:M61)

Stoicism in the face of health problems, particularly among African–Caribbean women, has been noted in other studies (Curtis and Lawson, 2000; Campbell and McLean, 2002). More pragmatically, the reason for blindness may remain uncertain because of difficulty in obtaining a clear diagnosis of ophthalmic disease in particular Caribbean locales. Reddie (2001) describes how discontinuity between contexts, from the Caribbean to Britain, is manifested in reluctance among some older people to share familial knowledge with younger generations. Such taboos may shape risk perception as much as lack of knowledge, as demonstrated in the following extract from a follow-up interview with two participants:

19:F42 ‘It’s communication, isn’t it?’

29:M38 ‘Yeah, they keep it quiet don’t they?’

19:F42 ‘There’s less communication. Certain things aren’t discussed (...)’

29:M38 ‘as well as it should, well, as *often* as it should be.’

19:F42 ‘And if they do know that they’ve got glaucoma, right, their understanding of it is limited. So,

they can’t actually discuss the issue with the next member, “I’ve got glaucoma and that’s about it”. What it’s about they can’t really (...)’

29:M38 ‘Yeah, they don’t understand it themselves. I suppose that’s why. Yeah, it boils down to communication.’

Whether there is reluctance to discuss visual impairment or blindness within some families, or simply ignorance of diagnosis, the result is lack of availability of salient memories in responding to information about glaucoma risk.

Images of blindness

Participants’ perceived invulnerability was compounded by their images of blindness, which did not fit with the clinical profile of POAG. Green *et al* (2002) reported two concepts of what blindness meant. The first was that of victim, ‘... a mix of sympathy or pity for the extreme dependence that was seen to result from blindness’. The second involved what were perceived to be unattainable models of heroism. The former concept was very evident in the interviews, with blindness portrayed as an ‘all or nothing’ state, resulting in helplessness and social isolation. For example:

‘I used to think that you just go blind ... it just shut off, you just went blind. I never knew that you *began* to get the problem.’ (G2:M61)

‘Loneliness, loneliness, like you just into a dark world ... It’s really a lonely life.’ (G2:F65)

‘... to become blind it would be terrible, you know ... it would seem like you wouldn’t be able to do anything for yourself ... if you’ve got one arm you can still do things ... if you can’t see what can you do?’ (20:M38)

Hull (2002) suggests that the mixture of compassion and horror with which blind people are regarded by the sighted is turned inward on the self, when a sighted person becomes blind. Thus, blindness is ‘a shattering blow to one’s self esteem’ (Hull, 2002). This is anticipated in the feelings expressed by study participants:

‘If I was a young person in that position, I would be very aggressive. Slightest thing would upset me, because I’d feel as if I lost everything. What’s the use of living? ... if I was a young person.’ (G2:M77)

‘... being a black male, I’m very interested in my car ... I couldn’t play football on a Sunday ... hang about with the guys, just being there, giving a certain impression of myself ... if I become blind then I’m outside this circle ... feel weak compared to being very strong.’ (G1:M40)

In both focus groups African–Caribbean people were characterised as particularly proud and independent, exemplified in the following exchange about the

apparent rarity of encountering black people who were blind walking the streets using mobility aids such as guide dogs or long canes, as shown in this extract from Focus Group 2:

M77 'Well, first and foremost, some Caribbean people don't like dogs, whether they are blind or can see. And they're kind of, *independent* people, who don't like to know that they're *leaning* on you, if you get what I mean. They'd rather *suffer first* before they make themselves a nuisance. I'm not being funny.'

Interviewer 'No, I understand.'

M77 'Whereas some people, if they feel hurt then they run to the doctor. Some people think they're going to be dead before they get to the doctor. It's something like that you see.'

M61 'And that's probably why we suffer more. This is probably why we suffer more.'

M58 'Too independent!'

M61 'A form of independence really. We are *not* going to get what's wrong with us looked at.'

M58 'It also — it all belong to poor education as well.'

M61 'Yes, and a lot of pride. Too much, in the wrong direction.'

Health accounts

Members of all age groups provided explanations of their personal frameworks for health and illness from which two themes emerged. The first theme was a 'health promotion account' (Stainton-Rogers, 1991). This emphasised illness prevention and the importance of adopting a healthy lifestyle in order to improve health and wellbeing. Such accounts could convey messages of self-empowerment, enabling individuals to plan and make sense of their actions (Stainton-Rogers, 1991). The second theme was a 'willpower account' (Stainton-Rogers, 1991) in which self-control, self-discipline and personal responsibility were important factors in maintaining and regaining health when ill. This was a particular feature of those participants who had diabetes, for example:

'Not everyone's cut out to go to the gym and stuff like that, but you can do it in other ways ... just be careful what you eat ... it's fitting into patterns ... discipline yourself, basically.' (30:M45)

'We black people would try to stick to restricted diet, according to what we was told and we have more self control. But ... white people, most ... they drink beer and eat excessive food. That is why us black people while we're diabetic are more controlled ... we don't like to be sick.' (G2:M77)

Both these participants argued for receptivity to health education messages aimed at secondary prevention, but, as another went on to point out:

'You think about "healthy body" checks, but never "healthy eye" checks.' (G2:F37)

and another:

'I don't think of my eyes as part of my health.' (21:F30)

Glaucoma risk perception and protection motivation theory

Originally proposed by Rogers (1975), protection motivation theory is generally regarded as a useful framework for development of health education messages designed to influence health behaviour, particularly where people are informed of a new, previously unknown threat (Easterling and Leventhal, 1989; Witte and Allen, 2000). Protection motivation theory conceptualises responses to fear-arousing information, or 'fear appeals'; that is to say, persuasive messages designed to alarm by depicting what could happen if the message is ignored. Low levels of glaucoma awareness coupled with participants' emotional response to the threat of blindness are an obvious basis for a fear appeal. An adaptive, danger-controlling response to such an appeal would involve:

- evaluating susceptibility to the threat of glaucoma blindness on the basis of available, relevant epidemiological and aetiological information
- obtaining accurate information on family history
- being able/willing to access the primary eye-care services for an appropriate eye examination and advice.

However, fear is only a motivator if the threat is sufficiently strong and people believe they can effectively protect themselves (Witte and Allen, 2000). Fear evoked by a threat is intensified if individuals feel unable to deter the threat effectively: in other words, they perceive a high threat coupled with low self-efficacy. Such individuals cope with their fear by denying the threat or reacting against the message, both of which responses are maladaptive. Some of these issues were revealed in an exchange between four men in Focus Group 1:

Interviewer 'Do you think if your friends, guys of your age ... do you think if they knew about the risk that they would go to an optometrist for a test ... ?'

M34 'I think as far as the information goes, more information just makes people kind of curious. And when they get that information I think they would definitely go, if it's been presented like I feel it's been presented today and the facts were all there then yeah, definitely. 'Cos I think everybody just wants to know really that the risk is gone, that there

isn't a risk other than, if it hits me, then I'll deal with it. But I think most people would rather go and get it checked ... so that it's done and dusted.'

Interviewer 'Would the rest of you agree with that?'

M42 'I don't think so, because I just tend to compare it with the amount of messages there are going around saying, "Don't take tablets at parties", and nobody takes any notice of those. I mean there are some tragic stories out there, but people are just generally, sort of, "This is my world here, and nothing's gonna affect me here".'

M43 'I think there's a truth in both situations. I think for someone like myself, people who wear glasses are just curious, because I'm used to getting my eyes checked and this is something I'll be asking about, whereas before I'd just walk in and they'd do their thing. I'll talk to them about it. So it's important for me to know about my own health and safety.'

M41 'I think from my point of view ... it's more the fact that I've got to go [to the optometrist] really and I've got to come back and it's all that. I suppose the glaucoma is one thing, but the whole process of it, going through your head. It's not like they'll say, "Yeah, you've got it and you'll have a tablet and it'll go away". So I think ... I'm not going to go blind, and that's the reservation for me personally. I can read all the brochures, look at all the pictures and I'm happy with that, simple as that.'

Two salient points are apparent in this exchange. Both G2:M34 and G2:M42 allude to credibility (Slater *et al*, 1996). For G2:M34, receptivity was enhanced by the perceived credibility of the message source. For G2:M42 the nature of the message appeared to cast doubt on the source and hence severity of the threat, leading him to question the credibility of the message. Both express different degrees of self-efficacy in responding to the message. G2:M43, a regular primary eye-care services user, demonstrates high self-efficacy and hence seems more likely to engage in danger-controlling activities. G2:M41, despite the fact that his father has POAG, is reluctant to attempt what he sees as a protracted process in accessing the service, and seems doubtful of the optometrist's ability to reassure him.

Cultural context and individual differences

The language of health education has moved towards the notion of tailoring interventions on individuals or subgroups, in recognition of the heterogenous nature

of culture (Kreuter *et al*, 2003). This is in contrast to targeting, which implies sufficient homogeneity to justify a universal approach to a specific ethnic community. Although often used as such, ethnicity is not a proxy for culture; thus paying attention to what Beckford (1998) describes as the 'multilayered voices that are inherent within black communities' is fundamental to raising glaucoma awareness. It is useful to envisage three overlapping formations as making up a cultural context for participants' viewpoints and opinions about glaucoma risk. The first is a universal or overarching black identity, the second a collective African–Caribbean identity, and the third an individual or self-determined identity (Larty, 1997). At different times and in different circumstances, one or another might be particularly salient. The influence of these cultural formations could be discerned within the awareness-raising strategies suggested by participants. For example, concepts and experiences associated with being black permeated discussions around the relative absence of black images in spectacle advertising. For example:

'When you see a picture [of a black person wearing spectacles] and the optician isn't black, you feel more comfortable. If white people see a picture they start to relate.' (19:F42)

Using graphic images is intended to give health education messages the appearance of cultural appropriateness because 'when the visual style of health education materials can reflect, describe, or otherwise express the social and cultural world of the audience, it makes the materials seem familiar and comfortable ... elements of design can create interest, establish credibility and set the tone for content in printed communication' (Kreuter *et al*, 2003).

However, a danger lies in reinforcing stereotypes, an issue explored through participants' reactions to the acronym ReGAE (Research into Glaucoma and Ethnicity). Their reactions drew on a collective identity associated with African–Caribbean symbols and cultural syncretism (Back, 1996), by which the reggae music genre serves as a reference point for both black and white communities:

'... it's not just black people that like reggae, so it can be both ways ... there's a lot of white people that like reggae as well.' (20:M38)

The importance of creating interest as well as setting the tone for additional content is emphasised in the following exchanges; the first involving a Rastafarian:

'Reggae, the ReGAE Project, it's smart innit? That is a brilliant idea!'

'You think so?'

'Red, gold and green yeah?'

'So you don't think people would be offended by that?'

'No, no, no, that's a good thing, the ReGAE Project. Yeah, that would attract most Jamaicans. Lady, you're smart you know! [Laughs] ReGAE Project, you got it!' (28:M36)

Extract for Focus Group 1

M39 'It's too jolly I think. It doesn't convey the whole seriousness of the actual thing. I mean, reggae is something joyful; it's cultural. It doesn't give the seriousness of the problem.'

M43 'The reason why this says "Yes" for me is because I look at anything that's majorly directed at black people and it helps to relate. What it is for me is, with everything else going on around it, what I'm looking at is it's got to draw someone's attention, even if it's by misconception. They'll be drawn to that. It forces them to read what else is there.'

M34 'I think it needs something more serious as M says, to handle the seriousness of it. As ReGAE you want to know more, but something else needs to stand out to say what that more is.'

As to what *more* ought to include, evidence suggests that individuals' sense of self-efficacy exerts a marked influence on their responsiveness to fear-appeal messages (Witte and Allen, 2000). In the light of participants' perceptions of the primary eye-care services, it seems important to recognise the importance of enhancing self-efficacy in the design, access and use of any glaucoma-related health education interventions.

The role of black churches in addressing social factors associated with health behaviour and contextualising health-related interventions is well recognised (Emmons, 2000). Norms of trust and mutual help associated with such collective identities underpin interpersonal health education strategies. These could prove an effective influence on eye-health knowledge, attitudes and behaviour; for example, in reframing understanding of blindness and visual impairment, providing a forum for exploring family eye-health narratives and increasing self-efficacy in relation to the primary eye-care services. Focus Group 2, a church-based support group, exemplified this role and other participants stressed its importance in relation to POAG.

In their study of glaucoma patients, Green *et al* (2002) point out that relevant health promotion information 'is usually only found in eye clinic waiting rooms where the population is already informed'. Participants urged greater use of the general practitioner (GP) context for raising awareness. In their view, the existing bedrock of trust in GPs could help to reinforce the source credibility of eye-health messages:

'You need a lot more information in the doctors where people of colour go ... I walk into my doctor's and don't see any information that says to me "African-Caribbean

people are suffering from glaucoma quite a lot".'

(G2:M61)

While interpersonal strategies are central to influencing eye-health behaviour, intervention at the level of individuals is also an important dimension. The notion of life-course as a form of cultural differentiation is evident in qualitative research into health behaviour (Backett and Davison, 1995). Some participants reflected this, expressing a sense of responsibility for maintaining their own health, including eye health, for the sake of their families. For example:

'Forget about me, think about your offspring. I think in our age group, we've gone past just thinking about ourselves now. We're thinking about those we're committed to.' (G1:M41)

'Well it's about health ... I'm getting older now and you think, especially the stage I'm in now at the moment, with my family and everything else. I think, you know, it's important.' (18:M34)

Individual differences in time orientation reflect a future orientation, which seeks to 'control what happens in the future ... including engaging in health promoting behavior' contrasted with a 'present orientation' around short-term consequences rather than the future (Kreuter *et al*, 2003). Ethnic differences in time orientation have been identified in some studies (Brown and Segal, 1996). The viewpoint below seems to reflect this, seeing it as a reason to stress the importance of present action in relation to future events, to create a more effective glaucoma-related health education message:

'I think from my personal point of view, looking at our population being black and all the rest of it, I think it'd have to be serious. 'Cos black people are just the types of people from my own personal experiences, if it ain't serious, if it doesn't look serious it can wait till next week, next month, whatever. If it looks serious they'll be like "Wow!". Not that we want to make anyone panic, but they need to know that it's serious to draw them. If not ...'

(G1:M34)

However, some of the female participants were inclined to view this as generally 'a man thing' rather than a specifically black or black male perspective. Whatever its basis, recognising the potential for individual differences in time orientation is important, given that late presentation to the hospital eye services continues to result in avoidable visual impairment and blindness in young African-Caribbeans.

Conclusion

Participants' descriptions of the impact of the interview on their thinking about glaucoma revealed that it

had caused them to confront and evaluate their personal motivations for using or not using the primary eye-care services, and enhanced their sense of self-efficacy.

‘... it got me to think a vast amount about my eyes and how little, in comparison to all the things that are issues for me ... I don’t think of my eyes as part of my health.’ (21:F30)

‘I think for someone like myself, people who wear glasses ... this is something I’ll be asking about. Whereas before I’d just walk in and they’d do their thing.’ (G1:M43)

The interviews prepared the ground for further community involvement in the clinical arm of the ReGAE Project, which will involve family mapping of glaucoma and phenotyping of the African–Caribbean eye by a research optometrist

In focusing specifically on the perceptions of African–Caribbean people who were outside the hospital eye services, this study has added to existing qualitative research on glaucoma. Clearly, such a local qualitative investigation should not imply general statements about the response of African–Caribbean people to POAG risk. Nevertheless, it offers valuable insights into the way eye-health behaviour may be shaped by individuals’ experiences and viewpoints and indicates the potential for community-based glaucoma awareness programmes to effect change.

ACKNOWLEDGEMENTS

This study was funded by Birmingham and Black Country Strategic Health Authority, Heart of Birmingham Teaching Primary Care Trust, City Hospital NHS Trust, Pfizer UK and Birmingham Social Services. Thanks are due to all those advisors, community organisations, individuals and interviewees who lent their support and gave up their time to participate in the study.

REFERENCES

- Back L (1996) *New Ethnicities and Urban Culture*. London: UCL Press.
- Backett KC and Davison C (1995) Lifecourse and lifestyle: the social and cultural location of health behaviour. *Social Science and Medicine* 40:629–38.
- Beckford R (1998) *Jesus is Dread: black theology and black culture in Britain*. London: Darton, Longman and Todd Limited.
- Brown C and Segal R (1996) Ethnic differences in temporal orientation and its implications for hypertension management. *Journal of Health and Social Behaviour* 37: 350–61.
- Campbell C and McLean C (2002) Ethnic identities, social capital and health inequalities: factors shaping African–Caribbean participation in local community networks in the UK. *Social Science and Medicine* 55:643–57.
- Cappuccio F and Khadra A (2001) Understanding health risks associated with ethnic groups: 1. People of African origin. *Pulse Clinical* September 8:52–3.
- Chen PP (2003) Blindness in patients with treated open-angle glaucoma. *Ophthalmology* 110:726–33.
- Cross V, Shah P, Bativala R and Spurgeon P (2004) *Glaucoma Awareness and the Primary Eye-Care Service: perceptions of a sample of African–Caribbeans in Birmingham*. University of Birmingham: School of Public Policy, Health Services Management Centre.
- Curtis S and Lawson K (2000) Gender, ethnicity and self-reported health: the case of African–Caribbean populations in London. *Social Science and Medicine* 50:365–85.
- Easterling DV and Leventhal H (1989) Contribution of concrete cognition to emotion: neutral symptoms as elicitors of worry about cancer. *Journal of Applied Psychology* 74:787–96.
- Emmons KM (2000) Health behaviours in a social context. In: Berkman LF and Kawachi I (eds) *Social Epidemiology*. Oxford: Oxford University Press, Chapter 11, pp. 242–65.
- Flick U (1998) *An Introduction to Qualitative Research*. London: Sage Publications, Chapter 8, pp. 76–97.
- Fraser S, Bunce C and Wormald R (1999) Retrospective analysis of risk factors for late presentation of chronic glaucoma. *British Journal of Ophthalmology* 83:24–8.
- Gibbs GR (2002) *Qualitative Data Analysis. Explorations with NVivo*. Buckingham: Open University Press, Chapter 1, pp. 1–15.
- Green J, Siddall H and Murdoch I (2002) Learning to live with glaucoma: a qualitative study of diagnosis and the impact of sight loss. *Social Science and Medicine* 55: 257–67.
- Hattenhauer MG, Johnson HH, Ing HH *et al* (1998) The probability of blindness from open-angle glaucoma. *Ophthalmology* 105:2099–104.
- Hull J (2002) Open letter from a blind disciple to a sighted saviour. In: O’Kane M (ed.) *Borders, Boundaries and the Bible*. Sheffield: Sheffield Academic Press, pp. 155–77.
- Johnson B (2004) Advancing understanding of knowledge’s role in lay risk perception. www.piercelaw.edu/risk/Vol4/Summer/Johnson.htm
- Kreuter MW, Lukwago SN, Bucholtz DC *et al* (2003) Achieving cultural appropriateness in health promotion programs: targeted and tailored approaches. *Health Education and Behaviour* 30:133–46.
- Landers JA, Goldberg I and Graham SL (2002) Factors affecting awareness and knowledge of glaucoma among patients presenting to an urban emergency department. *Clinical and Experimental Ophthalmology* 30:104–9.
- Larty EY (1997) *In Living Colour. An intercultural approach to pastoral care and counseling*. London: Cassell.
- Morjaria-Keval A and Johnson MRD (2005) *Our Vision Too: improving the access of ethnic minority visually impaired people to appropriate services*. Seacole Research Paper 4. Leicester: Mary Seacole Research Centre.
- Racette L, Wilson MR, Zangwill LM, Weinreb RN and Sample PA (2003) Primary open-angle glaucoma in Blacks: a review. *Survey of Ophthalmology* 48:295–313.
- Reddie AG (2001) *Faith, Stories and the Experience of Black Elders: singing the Lord’s song in a strange land*. London and Philadelphia: Jessica Kingsley Publishers.

- Rogers RW (1975) A protection motivation theory of fear appeals and attitude change. *Journal of Psychology* 91: 93–114.
- Slater MD, Rouner D, Murphy K *et al* (1996) Male adolescents' reactions to TV beer advertisements: The effect of sports content and programming context. *Journal of Studies on Alcohol* 57:425–33.
- Stainton-Rogers W (1991) *Explaining Health and Illness. An exploration of diversity*. London: Harvester Wheatsheaf.
- Wiggs JL (2000) Glaucoma diagnosis and management: genetics and glaucoma. *Ophthalmology Clinics of North America* 13:1–12.
- Witte K and Allen M (2000) A meta-analysis of fear appeals: implications for effective public health campaigns. *Health Education and Behaviour* 27:591–615.
- Wormald R, Basuri E, Wright L and Evans J (1994) The African Caribbean Eye Survey: risk factors for glaucoma in a sample of African Caribbean people living in London. *Eye* 8:315–20.

CONFLICTS OF INTEREST

None.

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Received 6 June 2005

Accepted 25 July 2005