Cross Cultural Perspectives of Sickle Cell Disease in the UK and Nigeria

Kofi A Anie and Ifeoma Emodi

Introduction

Sickle cell disease (SCD) comprises a group of genetic red blood disorders affecting people mainly but not exclusively from African, Caribbean and Asian origin. The predominant symptom is recurrent and unpredictable episodes of pain resulting from the blockage of blood vessels due to abnormally shaped “sickle” red blood cells, referred to as “vaso-occlusive crisis,” but there are other complications.

The UK affected population is estimated to be over 12,000, with about two-thirds living in London (Streetly, Maxwell & Meija, 1997). The prevalence rate in Nigeria ranges from about 18 to 32% (Effiong, 1996; Fleming, Storey, Molineaux, Iroko & Attai, 1995), with a suggested annual birth rate of 100,000 babies (Sergeant, 1997). The organisation of health services in the UK and Nigeria are different, and this has an effect on SCD in terms of outcome.

One of the objectives of behavioural interventions is to alter patients’ beliefs in order to improve coping, but not all patients respond well to them. Complex cognitive factors such as cultural norms, beliefs about health and illness, and degree of personal control may also influence the appraisal process, and thus predict the success or failure of interventions (Seville and Robinson, 2000). One aspect of the appraisal process is the perception of ‘locus of control’ whereby patients hold the belief that they have some control over illness (and therefore function better) instead of the belief in external variables such as medication, doctors or even God or fate. Rotter (1966) originally used this locus of control concept in social learning theory to explain individual differences in learning processes, and generally to describe two personality styles. This theory proposes that people who view reinforcement as conditional to their own behaviour (internal control) are better adjusted than those who see reinforcements as determined by fate, chance, or powerful others (external control). More specifically those with a strong internal locus of control are likely to take responsibility for their actions. This seems important for psychological interventions in patients with SCD, which focus on learning of effective coping strategies and management skills.

Health beliefs in Nigeria are different from the UK. In Nigeria, beliefs are usually influenced by cultural and religious values, which influence health behaviour such as coping strategies. For example, among the Igbo communities, SCD is believed to be the result of malevolent ‘Ogbanje’ (reincarnation) i.e. repeated cycles of birth, death and reincarnation (Nzewi, 2001). Other studies have shown that religious beliefs play a positive part in coping including prayer, faith in God and doctors, and a hopeful approach to health difficulties in Nigeria (Ohaeri, Shokunbi, Akindale & Dare, 1995; Uwakwe, Kofie & Shokumbi, 2001). Generally, health beliefs are also related to locus of control and may influence health status. Research in chronic illnesses such as chronic fatigue syndrome (Unger, 1997), diabetes and arthritis (O’Brien, 1995) has shown positive associations between higher internal locus of control and better health functioning. SCD patients in Nigeria could be expected to have beliefs
consistent with a locus of control influenced by external factors, leading to inappropriate coping responses.

Passive adherence coping such as taking fluids and resting are based on medical advice, whereas affective coping such as isolation, praying and hoping are more likely to be a result of patients’ own beliefs. These coping methods seem to combine both internal and external health locus of control factors. Therefore, assessing health locus of control in SCD patients in Nigeria and the UK would give further insight into coping strategies used.

The object of this study was to explore possible cross-cultural differences in psychosocial aspects of SCD in British and Nigerian adult populations, with the view to offering appropriate interventions in the future.

**Methods**

**Patients**

Adult patients with SCD attending sickle cell outpatients’ clinics at Central Middlesex Hospital in London, and University of Nigeria Teaching Hospital at Enugu in Nigeria were recruited opportunistically to the study after consent had been obtained. Forty-seven patients in London and forty-six in Nigeria took part in the study. They were all interviewed and administered questionnaires during the clinic appointment.

**Measures**

*Pain Interview (Anie et al, 2002)* – Pain status determined by patients’ reports of frequency, intensity and duration, and the number of visits to Accident and Emergency (A&E) departments, hospitalisations, and consultations with a general practitioner (GP) or family doctor for pain during a preceding 12-month period were recorded.

*Multidimensional Locus of Control (Wallston, Wallston & DeVellis, 1978)* – This 18-item questionnaire measures health beliefs and behaviour. Three subscales: Internality; Powerful Others Externality; Chance Externality of the Form B were used to identify individual beliefs. That is, own actions (internal), or independent influences (externals) of powerful others, fate, luck & chance.

**Results**

Demographic and clinical information on the participants are shown in Table 1. The study sample consisted of 14 males and 33 females aged 18 to 62 years from the UK, and 24 males and 22 females aged 18 to 53 years from Nigeria.

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic and Clinical Characteristics of Adults with Sickle Cell Disease Attending Hospitals in the UK and Nigeria</strong></td>
</tr>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>---</td>
</tr>
</tbody>
</table>
Age:  
Mean (SD)  
30.8 (9.5)  
25.0 (6.6)♦

Gender:  
Male  
14 (33%)  
24 (52%)  
Female  
33 (70%)  
22 (48%)

Phenotype:  
HbSS  
29 (62%)  
46 (100%)  
HbSC  
10 (21%)  
0  
HbSβThal  
8 (17%)  
0

♦ Significant difference between British & Nigerian Patients (p < .01)

**Pain and Health Service Utilisation**
Significant differences were evident in the frequency and duration of pain episodes, and visits to A&E departments (Table 2). UK patients reported greater number of pain episodes (t=2.48, p=0.015), longer duration of these episodes (t=2.88, p=0.005), and visited A&E departments more often (t=2.77, p=0.007). No significant differences were found on the other measures including severity of pain, hospitalisations and visits to the GP or family doctor (p>0.05).

**Table 2**

**Pain, Health Service Utilisation, and Health Locus of Control Indices in Adults with Sickle Cell Disease Attending Hospitals in the UK and Nigeria**

Means (standard deviations)

<table>
<thead>
<tr>
<th>Measure</th>
<th>UK (N = 47)</th>
<th>Nigeria (N = 46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Pain Episodes (12 months)</td>
<td>7.0 (10.6)</td>
<td>2.8 (2.4)*</td>
</tr>
<tr>
<td>Duration of Pain Episodes (Hours)</td>
<td>115.9 (100.6)</td>
<td>60.2 (70.1)♦</td>
</tr>
<tr>
<td>Pain Severity Rating (0-10 Scale)</td>
<td>7.3 (2.7)</td>
<td>7.5 (2.7)</td>
</tr>
<tr>
<td>Accident &amp; Emergency Visits (12 months)</td>
<td>2.7 (3.6)</td>
<td>1.0 (1.3)♦</td>
</tr>
<tr>
<td>Hospital Admissions (12 months)</td>
<td>2.4 (3.6)</td>
<td>1.7 (2.4)</td>
</tr>
</tbody>
</table>
Duration of Admissions (Days)  
5.1 (5.4) 5.2 (10.0)

General Practitioner Visits (12 months)  
3.7 (7.7) 3.1 (3.1)

**Health Locus of Control (MHLC):**

<table>
<thead>
<tr>
<th>Scale</th>
<th>British Mean (SD)</th>
<th>Nigerian Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>22.5 (5.0)</td>
<td>24.1 (5.8)</td>
</tr>
<tr>
<td>Powerful Others</td>
<td>17.4 (5.2)</td>
<td>24.0 (6.0)</td>
</tr>
<tr>
<td>Chance</td>
<td>20.0 (5.4)</td>
<td>20.2 (6.5)</td>
</tr>
</tbody>
</table>

♦ Significant difference between British & Nigerian Patients ($p < .01$)
* Significant difference between British & Nigerian Patients ($p < .05$)

**Health Locus of Control**

The mean score on the ‘Powerful Others’ scale on the locus of control measure for the Nigerians was significantly higher than the British patients ($t = -5.58, p = 0.000$). This shows that the Nigerian SCD patients are more inclined to this external locus of control for their health. There were no significant differences on the ‘Internal’ and ‘Chance’ scales.

**Discussion**

Psychosocial issues for people with SCD mainly result from the impact of pain and symptoms on their daily lives, and society’s attitudes towards SCD. In Africa, cultural factors are particularly relevant to these problems because of beliefs and practices. This study explored differences between adults with SCD in the UK and Nigeria.

The frequency and duration of painful crisis, and subsequent visits to A&E departments was significantly higher among British patients. This could be attributed to the colder weather, and easier access to free health service in the UK. There are obvious differences in the health care systems between the UK and Nigeria. Healthcare in UK is tax funded and provided free of charge at the point of access through the National Health Service, however this is not the case in Nigeria. During the study, patients attending the University of Nigeria Teaching Hospital at Enugu had to pay the equivalent of eighty pence for outpatient consultations. The financial burden increases to about four to five pounds sterling when transportation and medication costs are added, and when a patient is admitted to hospital. Therefore, patients usually visit the hospital or attend the outpatient’s clinic when they are very sick. Many patients ‘walk-in’ despite an appointment system, causing the clinics to be overcrowded with no guarantee of being seen. It would therefore be understandable for people with SCD in Nigeria to develop coping skills to help manage their illness in the community.

Beliefs influence an individual’s health locus of control, which would in turn determine the type of coping methods employed. This could also be influenced by external factors such as advice given by a health professional, family support, and work responsibility. The success of the coping strategy plays a crucial role as this determines the next step. If the coping method were effective, it would reinforce beliefs and allow the cycle to continue. However, if it fails,
the individual may resort to other responses such as reluctant utilisation of expensive health services. This experience could change their beliefs making them to seek new coping strategies. Within the Nigerian SCD population, external factors interfere with the decision to utilise health services, leading to a greater need to having effective community-based coping strategies.

These findings indicate that there is a need to develop appropriate psychosocial interventions in both countries. In the UK, awareness about ‘active coping’ skills needs to be increased and the patients should be encouraged to take more responsibility in self-managing SCD. By contrast, in Nigeria, the aim should be more public education about SCD to change beliefs, attitudes, and stigma. Nigerian patients require ‘psychoeducation’ to help reduce their negative thoughts about SCD, and encourage them to maintain their existing self-management skills.

References


