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# Exploration of indigenous knowledge systems in relation to couching in Nigeria



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**Background:** Couching is a traditional treatment for cataracts but often has poor visual outcomes, as identified during the Nigerian National Blindness Survey.

**Objectives:** To investigate why couching is accessed by individuals with cataracts in northern Nigeria.

**Methods:** The ten rural clusters in Jigawa State included in the National Blindness Survey were revisited to trace four groups of participants: cataract blind individuals, those couched or who had undergone cataract surgery and local couchers. Additional postoperative patients were recruited from the local eye department. Semi-structured interviews were undertaken with cataract blind and cataract-operated participants, and 27 in-depth interviews were conducted with those couched and five couchers. Qualitative data were translated, transcribed and analysed after immersion and reflection using a thematic framework.

**Results:** Half of the cataract blind attributed the cause to spiritual factors or past misdeeds, only 25% knew they had cataracts and 83% had not undergone ophthalmic examination. Cost, distance and unreliability of services were the main barriers to accessing surgery. Facilitators of couching were the responsiveness of couchers in relation to location, timing and payment, and immediate visual improvement. Couchers understood local beliefs, were itinerant and used a network of case finders.

**Conclusions:** Couching is accepted as it is entrenched in traditional beliefs and indigenous knowledge systems, and couchers are responsive. Lack of awareness and inaccessibility were barriers to cataract surgery. Strategies to improve cataract surgery must take account of local beliefs and factors influencing health-seeking behaviour. Couchers were willing to collaborate with professional eye care providers, but this will require time, skill and mutual trust.

## Introduction

Findings from the Nigerian National Blindness Survey (2005–2007) showed cataracts to be responsible for 43% of blindness among those aged  $\geq 40$  years.<sup>1</sup> Eighty-four percent (84%) of causes were avoidable, being similar to other smaller surveys in Nigeria and other sub-Saharan African countries. In the national survey, 42.7% of the 583 eyes that had undergone a procedure for cataracts had been couched, and 73% of these eyes were blind.<sup>2</sup> Other small-scale studies in Nigeria have reported similar findings.<sup>3,4,5</sup> In the national survey, couching was more common in the North although cases were identified across the country.<sup>2</sup> Although couching is practised in some other African countries,<sup>6,7</sup> in Nigeria couching is usually performed by traditional healers who focus on eye conditions.<sup>4</sup>

Most African countries lack human resources and infrastructure for eye health,<sup>8</sup> and in Nigeria services are mainly in major towns, with the North being less well served as there are fewer eye care providers in the North than in the South of the country. The cataract surgical rate, cataract surgical coverage and outcomes of surgery remain low in Nigeria,<sup>9</sup> and many eye departments do not work to capacity. The aim of the study was to determine reasons for the high uptake of couching despite poor outcomes, by exploring perspectives of couchers as well as those of community members. Jigawa State was selected for the study as it had the largest number of couched participants in the national survey.

## Methods

Purposive sampling and quantitative and qualitative methods were used with different participant groups to triangulate the findings. Participant groups included individuals whose eye(s) had been couched, those who were cataract blind, those who had undergone conventional cataract

surgery and couchers. The national survey database was used to identify couched participants (21), the cataract blind (1) and those who had undergone conventional cataract surgery (16). Additional participants in each group were recruited by snowballing, and couchers were identified through those with couched eyes and community leaders and members.

The research team comprised the researcher (an ophthalmologist [AT]), two ophthalmic nurses and two enumerators. The enumerators identified original survey participants and nurses took an ophthalmic history, measured visual acuity (VA) and referred the following individuals to the ophthalmologist: (1) those with a VA  $\leq$  6/60 in the better eye, (2) whose eye(s) had been couched and (3) those who had undergone cataract surgery. The ophthalmologist confirmed the VA and diagnosis using a penlight torch and direct ophthalmoscope, and identified eligible participants.

Individuals who had been couched were recruited and asked to identify others they knew to have been couched for in-depth interviews. Prompt questions were used to elicit their perceptions of what caused their blindness, what informed their decision to be couched, who paid and how they paid for the procedure, their perception of the outcome and what prevented them from going to the hospital. All interviews were conducted in private in the community in the local language. A nurse assisted in clarifying questions or responses, and an escort was often present. All interviews were digitally recorded after obtaining consent.

All those with a VA  $\leq$  6/60 in the better eye where cataracts were the cause were recruited. Semi-structured questionnaires were used to determine the duration and their awareness of their eye problem; what they perceived to be the cause, what they knew about treatment and how to access it, and what had prevented them from accessing cataract surgery.

Individuals who had undergone cataract surgery were recruited from study communities and local eye units. Semi-structured questionnaires were used to find out how they had accessed the service; what informed their choice; how much it cost and who had paid, and the impact surgery had had on their lives.

Couchers were traced through discussion with those whose eye(s) had been couched, and community leaders and members. After identifying their place of residence or work, the researcher contacted them via a third party and arranged a time to meet, if agreeable. In-depth interviews covered their knowledge of cataracts and other common eye ailments and how they treat them, how they identify cataracts and what causes cataracts, how they perform couching and how much they charge. Their willingness to work and collaborate with eye care workers was explored, including referral to hospital. Couchers were shown eight pictures of eye conditions (jpg. 4224×2816 size) and were asked to diagnose the conditions and explain how they would manage each. The photographs were of cataracts (two images), paediatric



Source: Photos taken by Abubakar Tafida. All images were taken after obtaining consent

**FIGURE 1:** Images of eye conditions used to assess coucher's knowledge and practices: (a) cataracts; (b) cataracts in a child; (c) traumatic cataracts; (d) corneal scarring; (e) trichomatous trichiasis; (f) pterygium.

cataracts, traumatic cataracts, trichomatous trichiasis, corneal scarring (two images) and pterygium; six of which are shown in Figure 1.

Quantitative data from the semi-structured questionnaires (cataract blind and cataract operated) were entered into an Access database and analysed in Access. Interview recordings were translated from Hausa into English and transcribed. Data were analysed after allocating each participant a unique code. Transcripts were read to familiarise the researcher with the content and to identify emerging themes of relevance using cut and paste techniques. Triangulation was performed between data from the different participant groups.

Ethical approval was obtained from Jigawa State Ministry of Health and the London School of Hygiene and Tropical Medicine. After reading out the information sheet, verbal consent was obtained from all participants, including permission to record the interview and use anonymous quotes. Participants did not receive payment or other inducements to take part and could withdraw from the study at any time. Anonymity was ensured by using codes for all the transcripts and quotes. Individuals identified as cataract blind were all referred for surgery.

## Results

All ten survey clusters were visited, and 363 of 407 (89%) participants from the survey were traced. A total of 80 events involving 89 participants were undertaken (Table 1).

Twenty-two individuals whose eye(s) had been couched were interviewed, ten of whom were male. Thirty-two cataract blind participants (58% female) aged 42–90 years were interviewed. All except one were blind in both eyes.

**TABLE 1:** Methods and number of events and participants in each group.

Participant group	Methods	Number of events	Number of participants
Couched participants	In-depth interviews	22	22
Cataract blind	Questionnaire	32	32
Cataract operated	Questionnaire	20	20
Couchers	In-depth interviews	5	5
Eye care providers	Focus group discussions	1	10
<b>Total</b>	-	<b>80</b>	<b>89</b>

Ninety percent were aware of their sight problem which ranged in duration from 2 to 96 months. Over 90% reported difficulties with activities of daily living and participating in social events. The sample of operated participants identified through the survey database was very low and further participants were recruited through the nearest eye departments. Most (18/20) had undergone modern IOL surgery, 50% were female, and their ages ranged from 54 to 80 years. Sixty-five percent (13/20) waited over 12 months before surgery, and 90% had undergone surgery within 12 months of the interview. Sixty percent had undergone free eye-camp surgery and the remainder had undergone hospital surgery. Among the latter, 70% were escorted to hospital by a relative, 10% went alone and 10% were taken by community health workers. Fifty percent of eyes had a VA of 6/18 or better with pin-hole. Over 95% were happy with the vision in their operated eye, being able to perform daily activities and attend social functions and would recommend surgery to others.

Twelve couchers were contacted, but only five (age range 37–52 years) were interviewed as the other seven all came from one family who declined to participate. Four were originally from Mali. All were male and all performed couching and treated other eye conditions. Four travelled extensively throughout Nigeria. All claimed that couching was passed down through the family, usually from father to son. In one family, five members were actively performing couching and the head of the family was the village head.

Results are reported under four headings: factors which promote couching, barriers to hospital cataract services, coucher's knowledge and practices, and their attitudes towards collaboration.

### Factors which promote couching

Couching is an ancient treatment which remains an acceptable form of treatment for cataracts in this community, as one in six cataract blind individuals said they would prefer couching. One coucher stated:

This man sitting here (pointing to community member) – I have worked on his forefathers countless times. There are some of his people that will come and when you tell them about hospital they will not go. They would rather come to see me. There are many that I worked on. (Coucher, M, 54 years)

### Accessibility and familiarity

Over 80% (18/22) of participants said the coucher lived within an hour's journey of their home. Many of those couched were much more familiar with couching than with

conventional surgery, as information about couching was often spread by word of mouth.

### Responsiveness

Couchers were willing to come to peoples' homes to perform couching at a convenient time and were flexible in payments and in the timing of payment:

I went to him [*coucher*] on Friday but he wasn't around. He then came over to my house the next day and worked on the eye. (Couched participant, male, 11M-KW)

Payment in kind was very unusual and prices ranged from N1000 – N13 000 (\$7 – \$93), with current prices being higher. The price charged reflected the client's wealth as well as the success of the procedure. A couched participant stated:

I gave him N50 (\$0.50) for the examination and told him I'd pay when my eyes are opened. And when he got back my eyes were still not seeing, so I told him 'I'm still not seeing'. I did not add anything on top of that. My husband, who was a man like them, gave him N1000 (\$7). (Couched female participant, 18F-KW)

One of the five couchers interviewed also revealed flexibility regarding payment:

Q: If somebody cannot afford the payment, what do you do?

A: I do it on credit – to pay off after two months or even after the harvest.... (Coucher, male, 45 years)

### Spirituality or mysticism

Some couched participants described how the coucher created an atmosphere of mysticism and spirituality around the procedure to give it more credibility and religious connotation:

He doesn't touch you.... When you lie down like this, he performs his ablution. He does what he intends to do. You won't know because he doesn't want anyone near him. Then when he comes to you, he goes from behind and opened the eyes and instilled some medicines into the eyes. Afterwards he leaves and you remain supine like that for about an hour until he comes back to tell you to rise. When he comes back he used something like cotton wool and cleans the eye, swabbing over the eye. You are lying supine so you are unable to actually see what was happening. (Couched female participant, 8F-FGW)

### Immediacy of and satisfaction with outcome

The immediate improvement in vision after couching, however slight, is another important enabler of couching. The immediate benefit witnessed by community members was very impressive, spreading by word of mouth, so reinforcing the benefits of couching:

Seeing? Look at this one [pointing to his eye] – I am seeing well with it. Look, I'm seeing those trees – I'm seeing those trees clearly. (Couched female participant, 14F-KGN)

I was told it was cataract and it was removed and then I started seeing again clearly. Clearly. (Couched participant, F, 14F-KGN)

### Active recruitment and advertising

Numerous participants gave accounts of how they found out where to go for couching. There appeared to be a network of contacts who actively identify, recruit and even escort potential patients to a coucher. A few did this for financial reasons, being given a reward by the coucher:

There was a contact. Somebody took me from here...and took me there. (Couched male participant, 38M-AT)

I was seeing when the eyes suddenly became blind. As a result of that, a person from Gayam, who lives in Kano? He has a sister here where I am. When he was told, he brought the traditional healer to our house, up to my room to treat me. (Couched male participant, 26M-MDH)

Advertising of health services is common in Nigeria, and this includes traditional healers, herbalists and couchers (Figure 2).

### Barriers to the uptake of cataract services

Almost two-thirds of cataract blind individuals lived within 3 hours of an eye hospital, but over 84% (27/32) had never attended despite 35% having contacted a health worker. Over half believed an eye operation would make their sight better; 7% did not know of any form of treatment. Twenty percent knew of a treatment but did not know where to go and one believed he needed spiritual intervention. Over 90% reported difficulties with daily activities and attending social events.

Reasons given for not accessing surgery were cost, no one to accompany them, other commitments, distance, being told to return later and other health conditions. Ninety-three percent would accept surgery if helped to overcome their barriers but



Source: Photo taken by Abubakar Tafida

**FIGURE 2:** Coucher's advertisement which says: '... Specialist eye doctor ... corneal ulcer, cataract blindness, itching and dandruff of the eye' (which is thought to cause cataracts). Note that the white pupils illustrate cataract blindness.

one declined because someone known to him had lost sight following surgery. Sixteen percent of those interviewed would accept couching.

### Lack of awareness and desperation

Almost a third (31.3%,  $n = 10$ ) of cataract blind participants attributed their visual problem to God, or old age (15.6%,  $n = 5$ ). Over a quarter (28.2%,  $n = 9$ ) attributed the cause to animist beliefs, such as the influence of evil spirits, spells, or being bewitched by adversaries, or past misdeeds. Excessive crying was also mentioned. Only 25% ( $n = 8$ ) believed their sight loss to be due to cataracts.

Most who had undergone cataract surgery heard about the service from community members or their immediate family. As with the cataract blind individuals, more than half of the couched participants were not aware of hospital services, some saying they would be willing to pay for surgery. When asked if he knew about cataract services in the hospital one couched participant stated:

I truly don't. I was lucky to know about this one and to have my sight back. (Couched male participant, 38M-TA)

One participant said that it was desperation that led him to undergo couching:

At that time we were desperate, and we didn't know about the one in the hospital. (Couched female participant, F-JCG)

### Distance and lack of responsiveness of services

Many participants commented that the hospital was far away. Some participants only went to hospital as a last resort after complicated couching. Another stated he had been to the hospital three times but had not been operated on:

I even went to Dutse but ... [pause] ... they could not accommodate us. They told us that they would operate but they did not and I did not go back. (Couched male participant, 36M-TA)

**Cost:** Cost was an important barrier, being reported by several participant groups. Prices for cataract surgery, which were corroborated by eye professionals, ranged from N2500 – N6000 (\$18 – \$43), the range being similar for couching. Families provided financial support.

### Coucher's knowledge and practices

Couched participants were usually given eye-drops or tablets to relieve pain which were often purchased from local informal drug sellers:

He told [my] children what to buy and they got some that became exhausted. They included ampiclox and those watery tablets called fish water ... (Couched male participant, 26M-KGN)

Only one coucher explained how he performed couching, confirming the spiritual element to the procedure:

With the person lying down, I keep praying in the eye and assuaging his fear until he calms down. Then I put the medicine onto the tip of my needle and then insert it from the temporal

aspect because there are few blood vessels on that side. Prior to that I pray to stop the blood because that is what frightens most people. The medicine solidifies the cataract and then I can pull it away and into the eye. You know the eye is like a bulb. (Coucher, male, 37 years, M 37-TH1 KBB) (Figure 3)

### Knowledge of common eye conditions

Couchers said they would treat all eight conditions in the images apart from trichiasis, which one said needed extensive experience. However, only three correctly identified cataracts, one explaining it was not a 'good cataract' because the pupil was dilated. They would not treat cataracts in children as they cannot cooperate (Table 2). Many conditions had local names and were treated with herbal infusions.

## Collaboration between couchers and eye care providers

### Willingness

All the couchers expressed willingness to collaborate with health workers, but traditional practices can be difficult to overcome:

Thank you...this is what I am looking forward to. Like this man sitting here (pointing to staff) in those days they used to send people to me and I used to send patients to them as well, but now that you are here I can also now go to where you work. If there is any need for us to meet you can call me through your staff. (Coucher, male, 45 years)



Source: Photo taken by Abubakar Tafida

**FIGURE 3:** Pointed instrument used to perform couching.

**TABLE 2:** Responses of five couchers to images of common eye conditions.

Eye condition shown in the photograph	Number who correctly identified the condition	Treatment couchers recommended
Trichomatous trichiasis	5	Refer
Corneal opacity	5	No remedy
Paediatric cataracts	5	Cannot treat
Cataracts	3	Couching
Traumatic cataracts	3	Difficult to treat
Pterygium	1	Difficult to treat

### Mutual trust and respect

Only one coucher explained in detail how he performs couching. The others declined to give details until a relationship of trust and respect had been established:

A: Yes, I would like to go and see what you do. Then you come back here and see how I'm doing mine. When we finish there are blind people waiting for me, but you show me yours first before I show you mine. [Laughter]

Q: You have to see mine before you show me yours?

A: Oh yes, you are the boss so you have to show me first! When you have shown me two or three cases ... Mine is very easy. I work under a tree, but for me to see you I have to wait 15–20 minutes. (Coucher, male, 45 years)

### Resistance by health workers

Another coucher lamented that eye workers do not attempt to bridge the gap, saying he would be willing to cooperate even if this meant a drop in income:

I will refer people to you but only those I cannot handle. That is the truth. A while back someone came to me with a penetrating eye injury. I tried to remove it but I couldn't. I honestly told him to go to the hospital because they have the equipment and the skills to do so, but I have done my best and I have not been successful. He came back to tell me that it has been removed and he thanked me for that. (Coucher, male, 45 years)

## Discussion

The main finding of this study is that couching in Nigeria is entrenched in tradition due, in large part, to cultural norms, lack of awareness about cataracts and limited access to hospital-based eye care.

Most studies on the role and activities of traditional healers in eye care are from East and Southern Africa where couching is not practised.<sup>10,11,12</sup> It is important to explore why people accept couching despite the poor visual outcomes,<sup>2,3,6,7</sup> and how eye care providers and couchers might collaborate to increase uptake of conventional surgery.<sup>11</sup>

Studies from a range of countries demonstrate that provision of services alone does not necessarily improve uptake. Lack of awareness, cost, accessibility and beliefs, and cultural and fatalistic norms are important, but poor quality of care and fear of poor outcomes are also important. Other studies in Africa on barriers to cataract surgery highlight the importance of bringing services closer to communities, increasing awareness through health education, ensuring affordable services and active case finding by community volunteers (e.g. Mectizan® distributors). Traditional healers and couchers could contribute to these activities.<sup>5,13</sup>

Central to an individual's health decision-making and behaviour are underlying beliefs about causation. In this study, fatalist beliefs were common, reflecting religious or animist beliefs as well as fatalism. Understanding these perceptions and beliefs is critical when planning strategies to improve uptake of services. Traditional healers are likely to

understand and be sympathetic to these beliefs and could play an important role in health education. Indeed, in our study several couchers had leadership roles in the community, being in positions of influence.

The responsiveness of couchers in relation to pricing, timing and the location of the procedure suggest that they fully understand the cost-benefit analyses households undertake, as reported by other authors.<sup>5</sup> Couching within the household reduces direct and opportunity costs, as do free eye camps which remain very popular. Weighing up the costs and benefits of cataract surgery is likely to be particularly important for poor, rural families as those requiring surgery do not usually contribute to household income as most are elderly. Eye care providers need to consider how services can become more responsive as eye camps are not sustainable and can be associated with poor visual outcomes. Approaches could include providing outreach surgery in hospital facilities where quality can be assured, transport can be provided, with a pricing structure or health financing system that reflects ability to pay.

In this study it became clear that word of mouth remains an important and trusted means of communication in rural Africa, reflecting the oral tradition of the continent, and eye care providers could use existing community structures and leaders to increase awareness. Individuals who have undergone successful cataract surgery could also explain the benefits of cataract surgery and act as case finders, an approach adopted by couchers in Nigeria. A fee for each cataract blind person brought to an eye department may also increase uptake of cataract surgery. Indeed, using 'aphakic motivators' has been recommended but not fully evaluated.<sup>14</sup> Media, particularly radio, are important communication channels in northern Nigeria which could be harnessed to explain the benefits of cataract surgery and possible harms of couching.

All the couchers showed willingness to collaborate with eye care providers. Engaging traditional healers in primary eye care has been successful in Malawi, Tanzania and Nepal and may be replicable in Nigeria.<sup>12</sup> However, co-opting them as case finders is likely to affect their income and standing in the community, and working with couchers in Nigeria will require time, skill and mutual trust.

Other studies have reported indigenous knowledge, systems and perceptions of ophthalmologists to couching in Africa<sup>15</sup>; couchers have been interviewed, and couching has been observed and recorded on video.<sup>16</sup> To our knowledge this is only the second study to interview couchers, providing insights into their role, knowledge, practices and attitudes. The study used different methods and participant groups enabling triangulation. Limitations are the small sample size for the quantitative studies, the study was only undertaken in one state which limits generalisability, and couchers were not asked to comment on the outcome of their procedures.

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## Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

## Authors' contributions

A.T. was the project leader. A.T. and C.G. were responsible for the study design. A.T. trained the field workers, collected all the data and undertook all the analyses. Both authors contributed to writing the manuscript.

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